The OIL WEEKLY

FOR THE DRILLING, PRODUCING, PIPE LINE INDUSTRY

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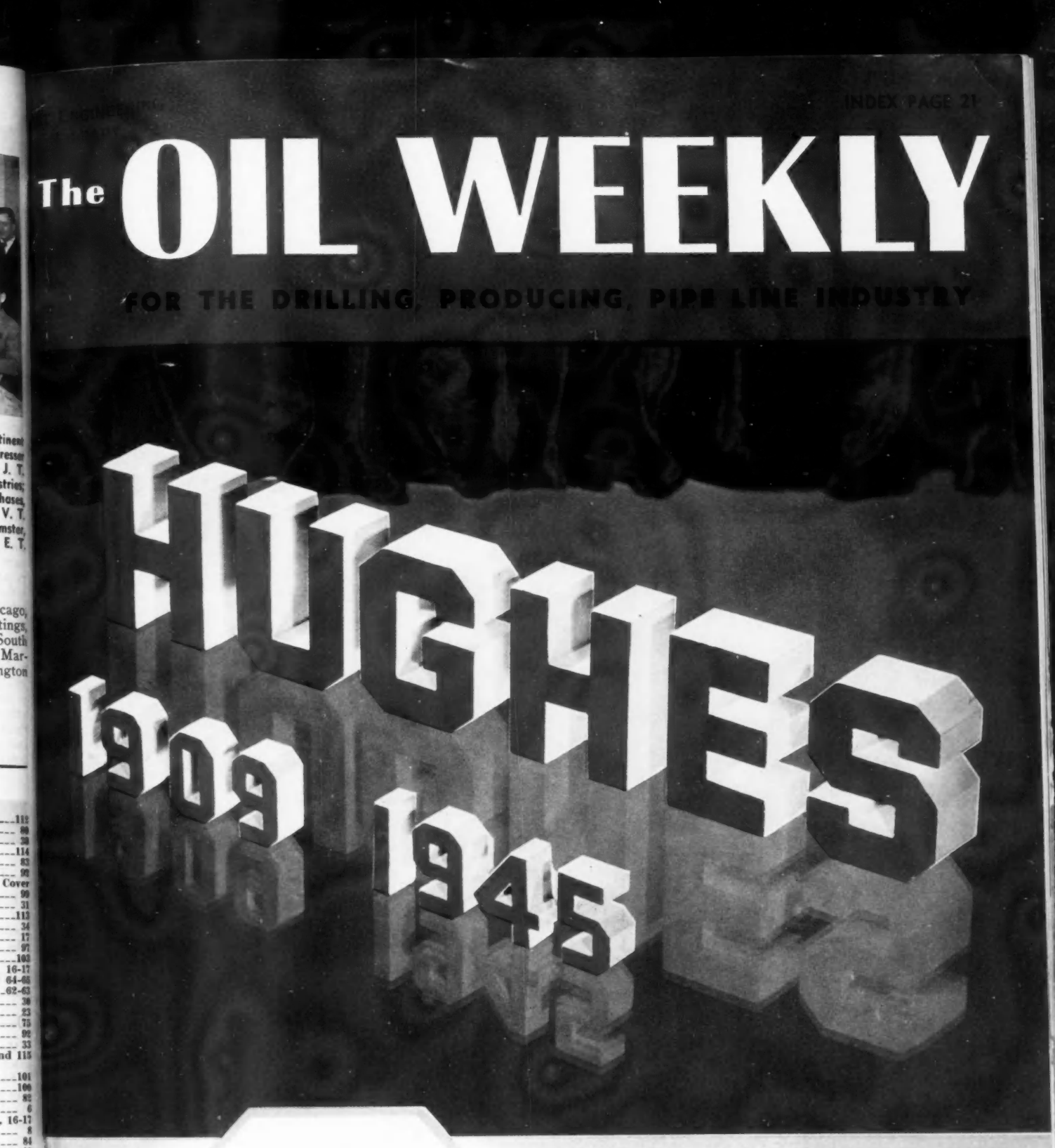

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THE OIL WEEKLY

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LOOKING AHEAD
... with the Editor

HOLDING the spotlight in the Permian Basin sector of West Texas, as the most important discovery for the current year, the TXL field in Ector County, now has more than 100 proved locations. Twelve or more companies will participate in the development which is expanding as heavy-duty rotary rigs become available.

The area yields premium quality crude from the 8000-foot Devonian and the 9800-foot Ellenburger. The Silurian lime, an intermediate zone, is a potential source of oil production, also.

Currently there are a number of wells flowing from Devonian. Production ranges from 1400 to 1900 barrels, capacity, per well.

Ellenburger dolomite which has recently shown more than 200 feet of effective saturation, overshadows the Devonian in importance. Absence of the Devonian chert section within the Ellenburger producing area affords a substantial saving in rock bits and in drilling time.

The name TXL is derived from the stock market abbreviation of the Texas Pacific Land Trust's listing, since the area is primarily open ranch country and removed from any designated town.

H. H. King, staff writer who has covered West Texas operations for many years will give a complete survey of the field in an early issue.

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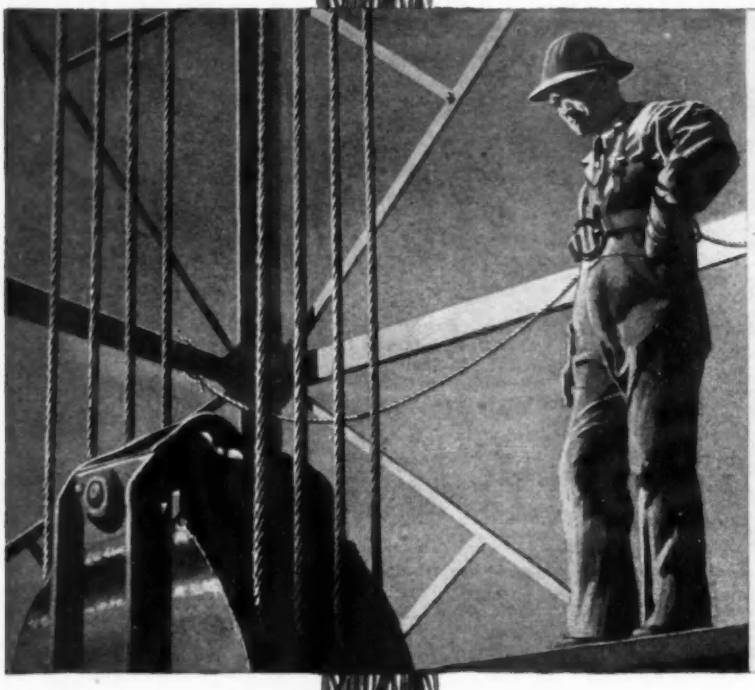

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The Outlook

West Texas soon will be called on to produce more crude oil, this in addition to 10,000-barrel per day increase already scheduled for July. More Tank cars for the area will boost rail deliveries to West Coast another 10,000 barrels, or to 46,000 barrels of crude daily. West Texas storage, meanwhile, has been reduced just about as low as possible.

* * * *

While rail shipments to West Coast from District 2 and 3 soon will approach 200,000 barrels daily, they cannot be maintained at this level. A railroad jam as troops and materiel move to West Coast will cause reduction in this volume.

* * * *

United Kingdom, France and Italy are requesting crude oil shipments, as well as refined products. Plants in these countries escaped severe war damage, have been rehabilitated. Producing enough crude to meet requirements is the problem.

* * * *

East Coast stocks have built up since V-E day because tankers have been moving large quantities from the Gulf Coast, this in anticipation of a coastwise tanker shortage when military shipments to Pacific Ocean from Gulf Coast increase. This movement is commencing, but as yet is on small scale.

* * * *

Enough District 3 tank facilities have been located to care for more than 10 million barrels of aviation gasoline and the filling program will be completed in next two months. Complaints that crude production and refinery runs should be curtailed may result, but military insists on this storage as strategic supply source and PAW merely is carrying out mandate.

* * * *

From $15 million to $25 million will be spent for drilling in the new TXL field of West Texas as fast as heavy rigs become available. One hundred locations already have been confirmed. Acreage ownership is so split up that most wells require from 1 to 4 offsets.

* * * *

The Connally Hot Oil Act will not be enlarged to include natural gas, even proponents admitting it would be of little value. There is no hot gas and pipe line operations would be hampered if tenders were required for gas shipments.

* * * *

Additional cutbacks causing further loosening of the labor market may be expected soon. Such cutbacks, contract run-outs and cancellations, directly attributable to V-E day were reflected in WMC's June revised labor market classification.

* * * *

It is likely that the ultimate "right combination" for tires in the postwar era will involve the use of both synthetic and natural rubber, possibly with natural in the carcass and synthetic in the tread. First mass test of synthetics to withstand hot weather is ahead this summer.

* * * *

There appears no doubt but that the Saudi Arabian pipe line which PRC undertook to promote will become a reality within a few years. The 1000-mile, $125 million project will be privately financed.

* * * *

The expected gradual easing of oil country materials will spur production abroad especially in fields already earmarked for exploitation to supplement the domestic contribution to 1946 world oil requirements.

* * * *

Winter will bring major test of government's ability to maintain rationing of heating oil in view of contraction of theater of military operations. OPA will have to talk fast to convince consumers of the FACT that fuel oil, kerosine are critically short.

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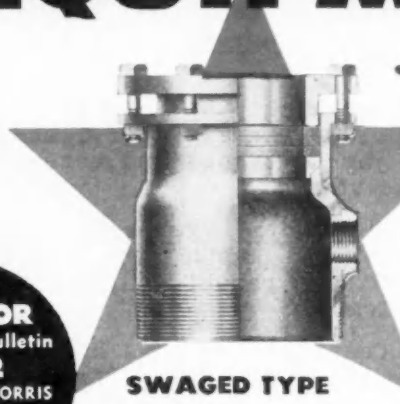

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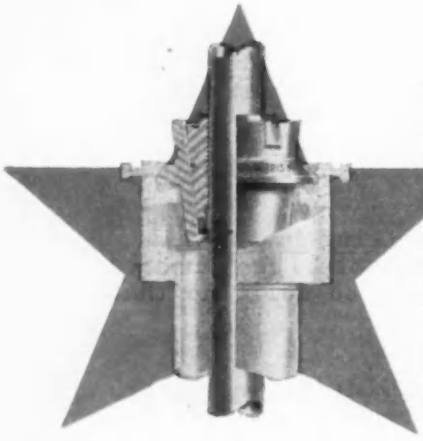

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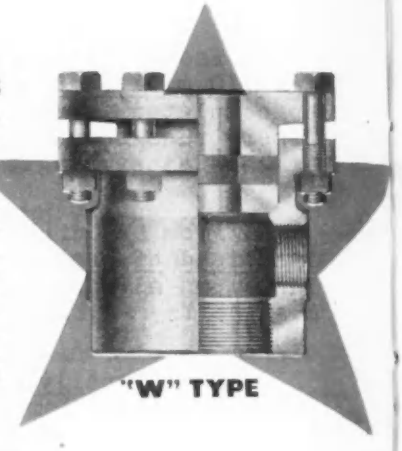

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The Changing Panorama

Adequate Statistics Are Natural Gas Need

EXPANDING natural gas operations, and the enlarged industrial and public interest in this commodity, creates a need for up-to-date statistics on natural gas production, processing and consumption. Steps should be taken immediately to make such information publicly available. Natural gas statistics should be assembled and dispersed on the same basis as the excellent data on crude oil, which is to say that figures should be as detailed, as accurate and as easy to get.

Such statistics on at least a monthly basis are a current "must." The most complete current source for information on natural gas, especially on production, is the annual report of the Bureau of Mines, released the middle of the following year. A few state conservation agencies have the information for their area, but no effort is made to distribute it or to assemble it on a national basis. Compilation of information available from current sources would be a beginning point.

A cooperative effort on the part of operating companies, state regulatory bodies, the Interstate Oil Compact Commission, and the Bureau of Mines could very well result in such a service. In this connection, data soon to be published by the Compact Commission will prove helpful as background material. Especially complete are the statistic records compiled by Jack Baumel of the Texas Railroad Commission, which will be a part of booklet on natural gas to be published by the compact.

Residual Fuel Oil Supply Big Problem

MOST troublesome of current petroleum supply problems is that of residual fuel oil. Stocks of this commodity are at critically low levels, and heavy shipping and naval warfare are certain to keep demand at unusually high rates until after Japan is defeated.

Current United States residual fuel oil stocks total but 38 million barrels. Stocks have declined steadily since Pearl Harbor, and at present are less than half the July, 1941, volume. In mid-1941, last prewar year, residual fuel oil stocks amounted to 91 million barrels, by mid-1942 they were down to 77½ million barrels, by mid-1943 to 66½ million barrels, and by mid-1944 had declined to 52 million barrels.

This sharp decline in stocks has occurred in the face of enlarged production rates. Daily output of residual fuel oil in 1941 averaged but 1 million barrels, and has steadily been increased to its present level of more than 1⅓ million barrels per day.

Although residual fuel oil production is at an all-time peak, there is a daily shortage of 150,000 barrels. Total domestic and export requirements have risen from 1.1 million barrels to 1½ million barrels daily. In an effort to meet the situation. United States refiners recently have adjusted their yields to obtain larger quantities of residual fuel oil. However, it is questionable whether they can increase the yield further by such methods.

Postwar Prospect of Cash for Ideas Plan

THE suggestions system whereby employes are urged to contribute ideas that will aid in better and more efficient operation of a company, has gained great impetus during the war. More than 6000 American companies are now paying for suggestions that are adopted. W. K. Lunt, president of the Industrial Relations Association of Chicago, thinks there should be no lag in further growth of the idea following the war. On the contrary, he predicts a greater use of suggestions, for "when industry again becomes lean and hungry for business it will be looking for any shortcuts in production methods with which to get an edge on competition."

Many oil companies have used the suggestions system profitably and more companies are taking advantage of it each year. By providing the enterprising worker an opportunity to prove his initiative and merit, the company is fostering the best in personnel relation, and at the same time adding to its own effectiveness of operation.

Rewards for suggestions considered on an industry-wide basis run into real money: A poll of 73 companies by the National Association of Suggestion Systems indicated that this group alone paid out $2,111,139 in 1944, or an average of $21.09 for the ideas accepted. Frequently the idea proves a bonanza for the contributor. On a royalty basis one company has already paid a worker $11,898 for his suggestion and other payments are to come.

MER Now as Basis For Later Allowables

WISE Texas operators are now asking for Railroad Commission hearings to establish correct maximum efficient rates of flow for the fields in which they operate. When the cutback comes after V-J day, it is likely to be applied first to those fields whose allowables exceed their MER. Horizontal cuts may be expected thereafter. The hearings now would establish the correct MER for each field under current operating conditions. This will avoid unwarranted cuts and assure an initial allowable in line with the ability of each field to produce.

Auto Driving Heads Toward Normalcy

AFTER three years of steady restriction, American automobile owners have commenced a trend back toward normal driving. This is welcome news to the petroleum industry, for it will cushion the effects of a sudden cessation of military demand for oil products. Increased gasoline rations, effective June 11 for occupational driving and June 22 for pleasure driving, was the signal for the changed outlook for car owners and civilian gasoline consumption.

However, there are other signals which also testify that the trend hereafter will be toward normal driving. New cars are to appear in the last quarter of this year. Only 200,000 may be made in 1945, but as many as 3 million may be manufactured in 1946. Tire allotments are to increase in the future, adding impetus to the trend. Likewise, lifting of restrictions on manufacture of automobile replacement parts is a part of the picture.

Of most immediate importance is the increase in gasoline rations. Reduced war requirements, following V-E Day, has made enlarged allotments to civilians possible. For all uses, there is available about 2,200,000 barrels of gasoline daily. Non-military gasoline consumption formerly totaled about 1,276,000 barrels daily. This was raised to 1,416,000 barrels.

Overall Society for Engineers Suggested

AN "OVER-ALL Engineering Society" to represent and speak for the engineering profession as a whole, is being discussed. Dr. A. B. Parsons, secretary of the American Institute of Mining and Metallurgical Engineers in an editorial in the June issue of Mining and Metallurgy, believes that under prevailing conditions engineers are justified in organizing in a way to make their collective weight count with Congress and lesser legislative bodies and with administrative agencies of government. Nominally, according to him, such organization would have the interest of the general public at heart, but its primary objective would be to further the welfare of engineers.

Parsons points out that between the technologic and political extremes there is an intermediate group of activities that he suggests may be styled "professional."

"Opinions differ," he says, "as to just how many of these fall most logically in the province of the technical societies. However, some of them do not; and it is these, together with the purely political activities, that would be performed by some over-all organization."

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The Week's News

A DEFINITE program for a federal postwar oil policy, involving adequate prices, concentration in the states of enforcement of conservation, tax relief both specific and general, and abstention by the government from any interference with the industry beyond that necessary to enforce the anti-trust and other general laws, was laid before the Senate Oil Investigating Committee by leaders of the industry. Story below.

Tidelands Claims—Officials of 46 of the 48 states, either directly or in a consolidated brief, urged the House Judiciary Committee to approve legislation relinquishing all federal claim to ownership of lands under coastal waters, lakes and navigable rivers, contending that success of the suit to oust the Pacific Western Oil Corporation from lands leased from California would enable the government to seize harbor installations in New York, on the Great Lakes or the Mississippi River; but Secretary Ickes told the committee no such widespread effect was possible and admitted all that was sought was the California offshore oil fields. Page 30.

Another Federal Foray—In another action in California, the Interior Department seeks to condemn the Cerritos channel between Long Beach and Los Angeles to protect the government's interest in the oil thereunder. Page 30.

O'Mahoney for Ickes?—President Truman denied that any immediate changes in his official family were imminent in view of report that Ickes was to be succeeded by Senator Joseph C. O'Mahoney of Wyoming, who, Washington observers believe, would be "acceptable" to the industry. Page 32.

Natural Gas Price Boost?—OPA is preparing to boost carbon black prices, reportedly five cents per pound as a forerunner of an increase in the price to be paid by the CB manufacturers for natural gas. Gas producers contend they need a higher price but lack substantiating statistics and OPA will go at the matter backwards and give them an increase on the ground that the carbon black producers received one. Page 31.

Doughton Resolution—The House passed the resolution which would legitimatize the option on intangible drilling costs, and sent the measure to the Senate. Senate approval, expected quickly, would make effective this safeguard against the possible results of the court decision in the F.H.E. Oil Company case, for presidential approval of a congressional resolution is not required. Page 28.

Argentina Oil Deal—House investigators may go into the details of a deal whereby the United States sends 500,000 tons of fuel oil to Argentina in exchange for a corresponding volume—on a heat basis—of linseed oil, and may bring out that PAW never was consulted about the trade and that little of the Argentine vegetable oil will ever come to this country. Page 29.

United Nations Superiority—United States beat Germany at the synthetic rubber manufacturing game, a technical mission has reported. Page 32. Similarly a group of American technologists which has been studying Nazi refinery and oil production methods concluded that they are less effecient than those in common use in the United States and the quality of the products, especially gasoline, inferior largely because of German inability to construct and maintain production capacity.

Texas Allowable Exceeds PAW—July allowable in Texas was fixed at 2,335,400 barrels daily or 2400 barrels in excess of PAW certifications. Page 31.

Anglo-American Oil Pact—The Anglo-American petroleum agreement is languishing in a state of "innocuous desuetude," Administrator Ickes said June 21.

Record Oil Production—United States has again set an oil production record, the daily flow for the past week registering within 100,000 barrels of 5 million barrels daily. Page 31.

$4 Gas Project Hearing—FPC will hear Southern Natural Gas Company's application for gas pipe line construction in four southern states on July 10. Page 31.

Oil Companies Buy Tankers—The United States Maritime Commission has sold six modern tankers, three each to two oil companies, that are currently under construction. Page 32.

PAW Takes Over—Humble Oil & Refining Company lost its court fight and on June 22 PAW took over its Ingleside refinery in compliance with an executive order. Page 32.

Industry Gives Views on Reserves, Taxes and Government Interference

Exhaustion of domestic resources of oil and natural gas is "generations" remote, members of the Senate Oil Investigating Committee were told last week by industry leaders. Economic factors, not difficulties of exploration, will continue to be the dominating influence in the discovery of future reserves.

The keynote for the industry's presentation was set by J. Edgar Pew, Sun Oil Company vice-president, who pointed out that in the past five years 7,320,000,000 barrels of crude oil have been produced, while at the same time proven reserves increased from 18,483,012,000 to 20,453,231,000 barrels.

With respect to natural gas, E. DeGolyer disclosed that a study his firm is making for E. Holley Poe and Associates shows that present reserves are in the nature of 200 trillion cubic feet, with 140 trillion cubic feet in the Appalachian area and in fields in other areas having individual reserves of 20 billion cubic feet or more.

Beyond that, M. G. Cheney, Coleman, Texas, AAPG president, testified that 1,049,000 square miles of the United States, not including the Atlantic coastal region and offcoast areas, all of which have definite oil possibilities, remain to be thoroughly explored.

As the hearing opened, Chairman Joseph C. O'Mahoney of Wyoming explained that its purpose was "to find out what is best to be done in the future" with respect to our oil and gas supplies.

Pew said he "found no substantiation for recent contentions that a latent weakness has been disclosed in our domestic oil resource, that we are threatened with a rapid exhaustion of this resource, that in the very near future we shall be dependent upon foreign sources for oil.

"The widespread assertion that a current rates of consumption we are only about 14 years away from an oil famine is based on a misunderstanding of the facts."

Pew explained how reserves figures, if they err, err on the conservative side, as indicated by the repeated upping of the potentialities of fields as their areas become more clearly defined. He said, too, that "the oil in areas not yet fully explored and thus waiting to be discovered constitutes, if precedent has any value, an important item in our inventory" which may easily become the most important.

Future Possibilities

In Texas, alone, he pointed out, only about 2660 out of 285,000 square miles of promising territory have been brought into production, and vast areas of the country in which thick sediments are found remain to be explored, as does the greater part of Alaska.

"Oil has always been discovered and produced when and as needed, and when conditions justify the cost of such development," Pew said. "Not until the industry fails under favorable conditions

to find oil will it be time for genuine alarm. Future oil supplies will come from natural gas, coal, lignite and shale."

Of considerable interest was Pew's analysis of the Naval Reserves, which he declared "are of little or no value for future national defense."

"There always will be enough oil for the Navy's requirements, as long as there is in this country the amount of oil it needs, as they would have first call on any production. The setting aside of these reserves does not create any more oil, nor does it add anything to the strategic position of the Navy."

Pew also minimized the importance of Reserve No. 4 at Point Barrow, Alaska, because of the lack of information regarding its extent and the need for development as well as transportation and refining handicaps.

"If the experience of the Army in trying to develop, transport and refine oil in connection with the Canol project, where the Army admitted the cost per barrel of oil was near $16, is any criterion, the Navy would have to spend probably billions of dollars to develop the oil for its requirements," he continued. "Most of this investment could easily be obsolete and of no value many years before it would be of any practical use or before it would be required."

Gas Resources Unknown

Explaining that oil or gas or both may be found in precisely the same type of geological trap, DeGolyer told the committee that there has been little effort to prospect for natural gas as such except in California and the Appalachian area and as a consequence the resources of the country are little known.

Many gas fields and many substantial gas shows have been plugged and abandoned, or neglected, in the past, either because of the extremely low price for the gas or the absence of any market whatever.

Deeper drilling, in both known oil fields and in areas already prospected unsuccessfully to shallow depths, may be one of the greatest sources for future additional oil reserves, he said, but are equally likely to develop even greater gas resources, since the proportion of gas to oil increases with the depth of the hole.

Natural gas, DeGolyer testified, is just coming into its own as a raw material for the manufacture of chemicals and, in the future, motor fuel.

"The time is not far distant when 10,000 cubic feet of natural gas may be regarded as a potential barrel of gasoline. If my speculation that, broadly speaking, our discovered gas reserves may be regarded as being of the order of magnitude of 200 trillion cubic feet, is not too unreasonable, they may well be of even greater importance, than our proved oil reserves, although it is clearly realized that only a portion of the gas reserves are likely ever to be used for conversion to liquid hydrocarbons."

DeGolyer explained that quantities of gas have been wasted—and are currently being wasted because of wartime demands for oil, coupled with shortages of materials and man power—but that much of t' waste was due to conditions which operated against conservation.

J. C. Hunter of Abilene, Texas, explained various conservation measures and outlined the operations of the Interstate Oil Compact Commission. As peacetime conversion nears, the states and the industry "ask and expect" a complete relinquishment of all federal regulations or control over the industry beyond the specific limits of interstate commerce, he said.

Appropriate congressional action, he said, should be directed, first, to preserving for the states their constitutional rights that they may go forward without federal interference to advance conservation work and, second, to relieving the industry "of the eternal uncertainty of where, when and of what nature will be the next bureaucratic attack."

While state gas conservation laws are not yet perfect, they represent "the best immediate reconciliation that can be had out of widely divergent state interests and views," E. Holley Poe, former PAW director of natural gas and natural gasoline, declared.

"Any extensions of federal power beyond the scope already defined by Congress in the Natural Gas Act would have to be made with gravest consideration for the varied rights of the states affected," he said. "Efficient production practices and reasonable prices, dictated by economic rather than political considerations, constitute the best guarantee of lasting conservation."

State Industry Fears

The drive for a definite federal oil policy was opened by John M. Lovejoy, Seaboard Oil Corporation, who declared flatly that it is the feeling of a large majority "that there is a definite trend of government to go beyond the constitutional functions of making and enforcing legal rules of conduct" and "evidences that some individuals in government feel that there should be a government-industry partnership for the future." He made specific reference to Petroleum Reserves Corporation "a government corporation with full charter powers to engage in a fully integrated oil business."

"The oil industry unanimously condemned formation of the PRC and now insists that this corporation be dissolved forthright to remove the constant threat of government competition," he said.

Lovejoy's remarks about the government corporation drew from O'Mahoney a reminder that "the restrictive effects of monopoly and government are the same" and an admonition that corporation-conduct laws must be so written as to prevent monopoly if the threat of government is to be laid.

Lovejoy listed the countries which have adopted government oil monopolies —Russia, Mexico, Bolivia and Argentina—and pointed out that in none of them have the oil reserves been developed to a point of self-sufficiency.

Various government activities, which he cited, "within themselves probably do not constitute serious inroads into the field of private enterprise, but there is a definite feeling in the oil industry that they do constitute an opening wedge that will be driven deeper and deeper," unless Congress limits various government agencies to their proper sphere, he continued.

PAW, he said in response to a question by O'Mahoney, is one of the agencies which should be discontinued as soon as the war need is over, and the PIWC represents a type of 'government-industry partnership" to which many in the industry are opposed.

Tax Matters Aired

Continuance of the percentage depletion deductions and the option on intangible drilling costs is necessary to protect the industry against the many hazards and the peculiar conditions prevailing in exploration, drilling and production, it was maintained by F. B. Plank of Cities Service Oil Company.

"A consistent congressional tax policy which recognizes and gives effect to the natural hazards of the business will produce the best result from the national viewpoint," Plank explained. "Congressional policy should put an end to unwarranted retroactive changes in the tax rules through administrative or legislative action."

"A national oil policy resting upon the solid foundation of wholehearted cooperation and mutual confidence between the oil industry on the one hand and the government and people whom it serves on the other hand, is just as essential to the security and prosperity of the nation as its policy of national defense," Walter S. Hallanan, president of Plymouth Oil Company, asserted. He said that a system controlled by forces other than those of a free economy operating under the law of supply and demand cannot succeed and the hazardous nature of the oil business is such that if it is to function in the national interest it must be free of restrictive forces emanating from a controlled price structure.

The only alternative, he contended, "is outright government ownership and operation which, I take for granted, is not desired by anyone who believes in the American system of free enterprise."

Such difficulty as may exist over the outlook for increasing our proven re-

Senate May Pass Soon On Doughton Resolution

Without argument and without opposing votes, the House of Representatives on June 19 approved the Doughton resolution declaring the intent of Congress that the option on intangible drilling costs should be a permanent part of the revenue code, and sent the measure to the Senate for concurrent action.

No difficulty is expected to be encountered by the measure in the Senate, which may pass upon it before the summer recess now tentatively planned to begin next month.

The legislation will settle an issue which, so far, has existed only on paper, since the Internal Revenue Bureau had announced that it would not change its policy to conform with the court decision until Congress had had an opportunity to express itself.

serves does not develop from any inability to find the oil but almost entirely from the cost of finding it in relationship to the frozen price structure, Hallinan declared in launching an atack upon OPA's handling of crude oil prices.

Specific recommendations previously laid before the Interior Department's petroleum committee for improvement of the Leasing Act, the lease form and the regulations were outlined by A. C. Mattei, president of Honolulu Oil Corporation, who attacked the muddled public lands situation and the 25 agencies which have to do with government-owned lands.

Almost 24 percent of the total land area of the country is today federally owned, he said. Mattei suggested that all mineral lands should be placed under the Interior Department, but maintained that a different attitude must be adopted toward their development.

"Assuming the continued existence of the leasing system," he said, "the United States as lessor, should not 'go into the oil business' by endeavoring to tell its lessees when, where, how deep and how many wells shall be drilled and by substituting its judgment, but the lessee's money, in the determination of operating practices which have no necessary relation to sound conservation principles." Mattei also declared that the Navy should abandon its policy of holding reserves.

"Only by maintaining a nation-wide healthy oil industry, with constant exploration resulting in new discoveries and added reserves, can the nation protect itself against an oil shortage in time of war; and it is only by such exploration and development in time of peace that the oil can be made available where needed in time of war," he said.

Because the subject is currently before a House committee, the question of ownership of tide and submerged lands was not discussed.

Navy Gives Views

Answering industry allegations that Naval reserves are so small as to be of little consequence, Captain W. G. Greenman, director of Naval petroleum reserves, indicated that the Navy merely considers them a form of insurance in the event of an emergency in a period when domestic production is badly depleted and before synthetic output has been fully developed. Greenman pointed out that when the reserves were set aside 30 years ago the Navy was using only 381,000 barrels of oil a year, and that in the last war it used only 12 million barrels annually; today, it is using about 250 million barrels a year.

It was indicated that the Navy is hopeful of getting more oil from the deeper horizons of its three continental reserves than the estimated 850 million barrels expected from the shallow zone.

More than 33,000 acres of Reserve No. 1 are yet to be explored, both laterally and in depth. Greenman disclosed that the department is anxious to explore the depths of all three reserves.

In Reserve No. 2, he said, the Navy is more or less at the mercy of private operators whose holdings checkerboard its lands, despite the agreement entered into in 1935 for cooperative development. However, he added, the House Naval Affairs Committee last year refused to give the Secretary power of condemnation on privately owned lands and leaseholds in the reserve.

The only Naval reserve of consequence, Greenman admitted, is Elk Hills. While it is hoped to drill in now unexplored portions of that reserve and also in Reserve No. 4 in Alaska, he said, "one would have to be a real optimist to predict that production from these reserves would provide more than a small percentage of oil required for a major future conflict."

However, he pointed out, the armed services are absolutely dependent upon petroleum, and substitutes and synthetics are not yet sufficiently developed nor likely to be produced within a reasonable time in sufficient quantities to permit reliance upon them.

"Without the splendid, patriotic cooperation of the petroleum industry, the oil requirements of this war could not have been met," he said. "It is certain that the industry stands ready to meet the next emergency in the same manner when and if it comes. It is necessary, however, that machinery now be set up in order at the close of the war the close cooperation now existing between the armed services and industry may continue to the end that peacetime requirements may be coordinated with the establishment of the vital reserve supply.

"Furthermore, the government must give full cooperation to industry to insure its future stability and strength."

Government oil reserves are all right for the Navy but they would not do for the Army, because another major war might require as much petroleum as the whole industry could provide, it was testified by Brigadier General H. L. Peckham, War Department oil liaison officer.

Peckham, recommending postwar importations to save our own supplies and prompt development of synthetic fuels, warned, however, that it would not be advisable to depend upon the latter in war time because of the vulnerability of plants to attack. "The United States may be in grave danger if it should ever become heavily dependent upon synthetic oil factories for its wartime supply, while its enemies were in possession of easily obtained liquid petroleum," he said. "The destruction of Germany's synthetic oil plants and refineries by strategic bombing was an important factor."

Army Recommendations

The Army spokesman said a reserve supply of oil is absolutely essential for national safety but that it would be impractical for the government to acquire, set aside and develop military reserves adequate to supply the entire demand. Peckham recommended postwar oil imports but under questioning, he refused to say whether we should import more than we did before the war. He emphasized that imports should not go to the extent where they would depress the domestic market to the injury of the industry's ability to produce.

The final session of the week was devoted to technical discussions of production, secondary recovery, synthesis and the potentialities of production from offshore deposits by representatives of the Interior Department with Assistant Secretary Michael W. Straus explaining the work which has been done on its five-year program.

Straus reported that the Bureau of Mines is actually producing synthetic fuels and gasoline from oil shale and coal, and explained that it did not go into the field of obtaining liquid fuel from natural gas because it is believed this is a field in which private industry will be able to work without government assistance. At the same time, he said the department is not convinced that such use of natural gas is a superior use of the limited natural resource which, even if utilized to the utmost would make barely a seven years' supply of liquid fuels. The department also has not gone into the treatment and distillation of tar sands because the processes are fairly well known, he said. The processes to be developed by the department are aimed at providing a jumping-off place for industry when it becomes necessary to resort to shale for our oil supplies. While not predicting how soon this would occur, Straus indicated that he did not agree with some of the optimistic predictions of long-available natural petroleum given the committee.

The hearings will continue this week with more Interior Department officials and representatives of PAW as witnesses.

Probe of Argentine Oil Deal Hinted in Congress

Congressional investigation of the trade of 3½ million barrels of fuel oil for an equivalent volume of Argentine linseed oil, asked of the House Interstate Commerce Committee by Representative Elliott of California will bring out some startling facts if it is ever undertaken.

Asked whether he had taken any part in the deal, Administrator Ickes said he had not and added that PAW had not been consulted by the State Department and Foreign Economic Administration, which had cooked it up. It was evident from his tone, however, that he did not believe it to have been particularly bright in view of the efforts which are being made to provide oil for the war in the Pacific, involving short rations again next winter for home fuel needs.

What Ickes did not say—probably did not know—and what was not generally known, is that while the paint and other linseed oil consuming industries of this country are badly in need of supplies they will get litle or none of this oil from Argentina. The greater part of what may amount to as much as 500,000 tons is destined for Europe for distribution in the liberated areas.

In asking Chairman Lea for an investigation, Elliott expressed the view of many members of Congress when he pointed out that it will deprive American citizens of badly needed oil, giving them little or nothing in return.

Interior Denies Intent of Seeking Title on Any But Offshore Oil Lands

Contending that for more than 100 years the federal government and the courts of the land subscribed consistently to the theory that submerged lands within the three-mile limit or, in the case of Texas and Florida, the three-league limit, and under navigable rivers and lakes were the property of the states, attorneys general for 46 states last week urged Congress to call a halt to "sniping attacks" which they said have clouded title to thousands of miles of coastline.

Appearing before the House Judiciary Committee hearings on measures designed to relinquish federal claim to submerged lands, representatives of some 20 states outlined dangers raised by the Department of Justice suit to oust the Pacific Western Oil Corporation from 144 acres of land leased from California.

Attendance by Chairman McCarran and other members of the Senate Judiciary Committee will make unnecessary repeating the House investigation.

The states' brief was signed by 46 attorneys general, the only nonsubscribers being Washington and Arizona, both of which, the committee was told, have indicated agreement with the legal principle.

Robert W. Kenny, California attorney general, declared it doubtful if federal officials realize the far-reaching and unsettling effect of their proposals, explaining that their success would overrun the long-established doctrine of state ownership and the separation of power and authority between the state and federal governments.

Peculiarly enough, state officials said, while the Supreme Court has original jurisdiction over all cases between federal and state governments involving boundary questions, the State of California was not named as a defendant in the government's suit.

Supreme Court Rulings

Expressing confidence that, if carried to the Supreme Court, the result would be a vindication of the states' position, which the court has upheld in maybe 50 cases in the past century, Leander I. Shelley, general counsel for the New York Port Authority, said the uncertainty of the situation might serve to retard postwar development of water fronts all over the country. Some action also must be taken to protect filled-in and reclaimed lands on which, in many cities, whole sections of the business, financial and industrial activities are located, he said.

That this effect already is being felt was developed by Grover Sellers, Texas attorney general, who testified that the suit "has disturbed those who have made and are making extensive investments in Texas' submerged lands."

Consistently, since its admission into the Union, he asserted, Texas has claimed the boundary of the state as being three leagues out in the Gulf of Mexico, "without any protest from the United States." Sellers pointed out that the United States has condemned the title to certain of these submerged lands as against the state and cases are now pending in which the federal government asserts that the title to the lands is in the State of Texas.

Testimony before the committee made it clear that while the question of oil deposits under offshore waters is of great importance, other mineral deposits, fisheries and river and harbor improvements running into big money also is affected. It was because of this great stake that the 46 states got together.

Unless Congress acts, the committee was warned, the present suit may be only the opening gun in a long-time campaign, and even if the Supreme Court rules against the government in this case, it is feared that officials will bring other suits and seek a loophole.

Texas Land Commissioner Bascom Giles declared that its title to the 4½ million acres of submerged lands off its coast is on the same basis as its title to the 30 million acres of public lands in the state, and if the federal government can claim the former there is no reason why it also could not claim the latter. All told, he figured, the state has received $11 million from royalties on the underwater leases.

He made no attempt to estimate the value of the underwater lands of the state, but said that the small acreage already under development has proven reserves estimated to be worth more than $150,000,000.

Giles told the committee that Texas considers the federal government a "claim jumper" and indicated that considerable resentment exists over the attempt to usurp title to the lands.

No representatives of the government departments appeared before the committee, but Secretary Ickes sent a letter to Chairman Sumners attacking the position taken by state representatives that the underwater lands of all the states were threatened.

Although Sumners had announced a general invitation had been extended to department officials to appear, Ickes said it was not the practice for cabinet officials to go before committees without specific invitation, and no bid had been extended to him nor the Attorney General or Secretary of the Navy, both of whom have an interest in the matter.

In his letter, Ickes declared that "California oil interests and not states' rights are the real issue," and declared neither the department's interest nor the suit now pending in California would in any way affect the lands of New York or any other state.

On this ground, Ickes attacked the states' brief, declaring that 40 of the attorneys general "find themselves representing clients other than those states where they hold office." The six officials with a real stake in the matter, he explained at a press conference, are those of the coastal states which have oil.

Ickes pointed out that no leases have been issued by his department nor has it questioned the titles to the land, but that for some eight years he has taken the position that "this issue of ownership was a legal one which should be resolved by the courts."

At his press conference, Ickes declared his only interest was in the oil underlying the offshore lands of California and that there was no intention of having the federal government seize anything else. He expressed doubt if a favorable decision in the California case would even give a basis for seizure of Texas' offshore lands, pointing that the two states entered the Union on different bases.

Should the situation threaten non-oil properties, he said, "this department would at once join those who would want to protect harbor and other interests in all areas where there was no question of oil."

Cerritos Channel Oil Deposits Now Sought

The Interior Department last week prepared to initiate condemnation proceedings to acquire for the federal government the oil deposits underlying the Cerritos channel between Long Beach and Los Angeles, California, acting under an executive order invoking the Second War Powers Act, issued by President Truman June 15.

The determination to condemn followed the government's failure to obtain the oil through court proceedings, the Supreme Court having refused to review lower court decisions holding it to be the owner of the land but not of the underlying deposits reserved by the former owner, Union Pacific Railroad.

Basis for the move is the contention that wells on adjacent properties are draining out the oil underlying the lands deeded to the government in 1908 and 1918 for the construction of a waterway. The district court had held that there was a reservation in the original deed which limited the use of the land to a waterway, while the Circuit Court of Appeals held the government to be the owner of the land but did not pass on the ownership of the oil.

Meanwhile, it was disclosed by Secretary Ickes, the department last year asked for bids for leases on the land and received six or seven offers, the best of which, still in the department and likely to be accepted if the land is condemned, was submitted by a group of oil men headed by Ed Pauley.

The land consists of a strip 600 feet wide and less than three miles long.

Contracting Company

J. I. Bishop and L. H. Lock have announced the organization of Bishop & Lock Construction Company, pipe line contractors, with headquarters in the Magnolia Building, Dallas, Texas. Bishop and Lock have dissolved the partnership with E. A. Black, formerly Black Construction Company.

Carbon Black Price Increase Would Permit Higher Payment for Gas Used

An increase in carbon black prices—reportedly around five cents per pound—is being given serious consideration in the Office of Price Administration.

The higher price will not be for the benefit of the carbon black producers or an incentive to expand production, but is to permit the OPA to provide an increase in the price they can pay for natural gas.

The only thing holding up issuance of the order, it is understood, is the difficulty which is being encountered in finding a legitimate basis for increased gas prices, due to the peculiar conditions under which the business has developed and the lack of any sort of statistics which will demonstrate whether producers are losing money.

Prior to the war, it was explained, buyers of the gas offered producers either a flat rate for the gas as it came out of the well or a percentage of the return from end products. In most instances there were no alternative outlets and producers perforce accepted the terms offered.

Over the past two years or so there has been increasing reluctance on the part of operators to sell the gas at the low prewar prices and difficulty was encountered by the carbon black manufacturers in securing adequate supplies. An increase in gas prices was sought by the operators, but they were never able to provide the OPA with the data it required to make a determination, although officials are understood to have gone so far as to tell the operators that if they could furnish any kind of evidence that they needed a higher price it would be granted.

The situation now has become so acute that OPA is expected to grant an increase for the avowed purpose of bettering the supply of carbon black badly needed for the tire program.

The higher price for carbon black will be granted to provide a basis for the gas-price increase in line with the OPA's policy of not advantaging one branch of an industry at the expense of another, it was said.

Crude Oil Production in the United States

(Estimates compiled by The OIL WEEKLY. All figures indicate daily averages, in barrels.)

STATE OR DISTRICT	PRODUCTION IN WEEK ENDED June 23	June 16
Alabama	700	700
Arkansas	78,700	79,150
California	948,900	947,800
Colorado	11,550	10,950
Florida	15	15
Illinois	205,800	200,200
Indiana	11,800	11,600
Kansas	276,500	275,150
Kentucky	29,600	29,000
Louisiana	367,900	368,000
North Louisiana	69,050	69,150
South Louisiana	298,850	298,850
Michigan	49,450	48,200
Mississippi	50,600	52,000
Missouri	100	100
Montana	25,090	21,565
Nebraska	900	900
New Mexico	104,400	104,400
New York	13,900	12,800
Ohio	6,500	6,350
Oklahoma	384,300	386,350
Pennsylvania	36,650	35,700
Tennessee	35	35
Texas	2,180,400	2,180,400
Upper Gulf Coast	563,100	563,100
East Texas Field	377,600	377,600
Rest of Eastern Texas	139,850	139,850
Lower Gulf Coast	253,550	253,550
Southwest Texas	82,800	82,800
South Central Texas	21,350	21,350
West Texas	497,550	497,550
North Texas	154,600	154,600
Panhandle	90,000	90,000
West Virginia	7,700	7,400
Wyoming	107,850	107,350
Total United States	*4,899,340	4,886,115

* New all time peak.

Southern's Hearing on Gas Project Scheduled July 10

The Federal Power Commission has called a hearing for July 10 on the application of Southern Natural Gas Company for construction of additional facilities in Louisiana, Georgia, Alabama and Mississippi to increase its delivery capacity from 220 to 245 million cubic feet daily.

The project, with an estimated cost of $3,771,760, involves approximately 116 miles of pipe line, addition of a 1200-horsepower compression station and other facilities.

The commission postponed until September 18 a hearing scheduled for June 20 on the application of Panhandle Eastern Pipe Line Company for authority to export 33 million cubic feet of natural gas daily to Canada.

The postponement will make no difference in the company's ability to carry out its export plans, since WPB on May 29 ordered it to make no deliveries of gas to Canada until it has delivered 9 billion cubic feet to the Ohio Fuel Gas Company during the period ending October 31, next, and prohibiting any deliveries of gas to Canada by Panhandle Eastern during January, February, March and December of any year.

The FPC pointed out that if it did grant authority to export, little or no gas could be delivered to Canada until April of next year, except for a possible period in November.

The September hearing is expected to involve rate schedules now under examination by the commission covering Panhandle's entire pipe line system, the result of its order of September 23, 1942, requiring reduction in its rates, which was recently affirmed by the Supreme Court.

Davies Explains Needs for July Production of Crude

No change will be made in the production rate for Texas in July but California will be upped 5700 barrels daily over June, Deputy Administrator Davies announced last week.

Davies said that while the overall July certification for Texas will remain at 2,170,000 barrels of crude daily, changes in certifications within the state will be needed to meet requirements for particular types of crude and to adjust supply to fit transportation.

"Additional quantities of West Texas crude are needed in California so that West Coast refining facilities may be operated at a maximum. The need for war products is even greater in the case of fuel oils than a two-front war required," he said.

"Shift in requirements from the Atlantic to the Pacific, necessitating redeployment of tankers, has resulted in some build-up of stocks of sweet crude oil along the Texas Gulf Coast. The certification changes within the unchanged state total for crude oil production have thus been made to provide the needed additional West Texas crude and to reduce the production of sweet crude oil."

The California rate calls for 952,000 barrels of crude and 60,900 barrels of natural gasoline and condensate daily, increases of 5000 and 700 barrels, respectively, over June.

The figure is 23,500 barrels above the maximum efficient rate but Davies explained that "all refineries in the Pacific Coast area must be operated at maximum to meet the petroleum needs of the war program."

Texas Allowable Exceeds PAW July Certification

A daily allowable of 2,335,400 barrels for July was ordered by the Texas Railroad Commission last week following state-wide hearing. This is 2400 barrels above the 2,333,000 barrels daily certified by the PAW. The PAW certification called for the production of 2,170,000 barrels of crude oil daily of which 493,000 barrels was to be produced from West Texas.

The PAW certificate provided that 10,000 barrels should be cut from the sweet crude production in Railroad Commission District 4 (Southwest Texas) because of difficulties of transportation and refining. West Texas in turn was to produce the 10,000 barrels cut from Southwest Texas.

The commission fixed 26 producing days for most Texas fields with the East Texas field producing 25 days. The Panhandle field is exempt.

At the state-wide hearing purchasers filed nominations to buy 2,363,464 barrels daily, an increase of 9017 barrels over June nominations. The nominations dropped 8890 barrels in District 4, Soutwest Texas, but these were more than offset by increased nominations from other sections, principally West Texas and the Panhandle.

O'Mahoney Mentioned as Possibility For Cabinet But Ickes Still at Desk

Reports that the last member of the original Roosevelt cabinet—Secretary of the Interior Ickes—was about to resign caused more than a little stir in Washington last week, but when it cleared up Ickes was still sitting in his office and President Truman, at Olympia, Washington, denied that his removal was contemplated.

Before one of the largest groups of newspaper reporters gathered in recent years to question him, Ickes answered a lot of roundabout questions in an equally roundabout manner, but when asked directly whether Truman had accepted the resignation he submitted the day after President Roosevelt's death, he said he had not. And at the close of the conference he said "I expect I shall see you again."

For a full week, stories that Ickes was out were frequent in the daily newspapers, which named as his possible successor, among others, WPB Chairman J. A. Krug, Senator Sheridan Downey of California and Senator Joseph C. O'Mahoney of Wyoming.

Told that one paper named Krug and another O'Mahoney, Ickes chuckled and said "they are both right; it would take two men to fill this job."

Even before President Truman quashed the rumor of further changes in his cabinet at this time, experienced observers were confident that the newspaper stories had been planted and recalled that there are men high in the confidence of the President who would like to see a new head in the Interior Department.

While Ickes will not leave at the moment, it would not be surprising if he relinquished his office a couple of months hence when it is generally expected the President will also seek a new leader for the State Department.

A canvass of oilmen in Washington for the hearings before O'Mahoney's committee disclosed that, on the whole, they felt the senator might make a very acceptable Secretary of Interior. The smaller oil operators, they said, would feel he was a friend, but the large companies might have some doubts of his theories on the prevention of monopoly, although they admitted that the Department of Justice and not Interior is in charge of antitrust law enforcement.

There were, however, two things against his appointment: One, his reported statement to a colleague that he wouldn't take the job and, two, a reported statement by President Truman that he would make no more cabinet appointments from Congress.

Germany Found Far Behind U. S. in Synthetic Rubber

American synthetic rubber, the methods of manufacturing it and the products made from it are superior to anything the Germans were able to develop, the War Production Board and Rubber Reserve Company announced jointly June 21.

A technical mission sent to Europe for study reported that while Germany developed commercial synthetic rubber production years ago, it never got actual production above 110,000 tons a year. By contrast, the United States in two years established a whole new industry with a rated capacity of 850,000 tons a year which actually can operate at 130 percent of capacity.

"The United States and its allies could not have produced tires, tubes and other rubber products in sufficient volume and of adequate quality to maintain their armed forces and a civilian economy if they had to rely on the type of synthetic rubber used by the Germans," it was declared. "The allied victory in Europe might not yet have been attained and the Japanese war probably would be prolonged for many months if the allied countries had not developed a more usable rubber.

PAW Takes Over Refinery

Government seizure of the Humble Oil & Refining Company's Ingleside refinery, near Corpus Christi, was carried out June 22 after the company failed in court attempts to hold off President Truman's order.

Federal Judge T. M. Kennerly of Houston on Wednesday issued an order denying Humble's petition for a preliminary injunction to restrain the seizure. The company immediately filed notice of an appeal and Judge Kennerly granted Humble a stay of temporary restraining order preventing the seizure until Friday, June 22.

Humble filed an amended petition to be heard in the Fifth District Circuit Court of Appeals but Federal Judge J. C. Hutcheson, Jr., denied the company's request for a stay order until the case could be heard and the temporary restraining order was laid aside and PAW took over the plant.

Texas Readies for FPC

Last week Governor Coke Stevenson indicated his indorsement of the policy for gas advocated by the committee which he had appointed. The governor explained that the group's 16 points really boiled down to a declaration of states rights which he favors. But the legislature must declare a policy for gas or speak for the state as a whole, he declared.

Stevenson named a committee to organize evidence to present at FPC hearings and in Congress as follows: Olin Culberson, chairman; Maston Nixon, vice chairman; R. C. Kay, D. A. Hulcy, A. H. Rowan, Charles I. Francis, J. S. Bridwell, E. L. DeGolyer, Rex Baker, Geo. A. Hill, Jr., B. G. Byars and Paul Kayser.

Oil Companies Buy Three Tankers Under Construction

The Maritime Commission on June 22 announced that six tankers now under construction at the Sun Shipbuilding and Dry Dock Company yards at Chester, Pennsylvania, have been sold to Standard Oil Company (California) and the Atlantic Refining Company.

Each of the companies will acquire three of the tankers at their estimated cost of $2,850,000 each, exclusive of the cost of national defense features borne by the commission, each turning in six obsolete tankers in part payment.

The new T2-SE-A1 tankers have 6000 horsepower turbo-electric propulsion, giving an average speed of 14.5 to 15 knots, with a cargo capacity of 138,333 barrels of gasoline.

Bulk Tonnage Committee Named by Administrator

Membership of the new bulk tonnage coordinating committee, which will work with the European petroleum supply committee, North Africa supply and distribution committee, West Africa supply and distribution committee and the Near East and Far East supply and distribution committee in coordinating tanker transportation problems, were announced by Deputy Administrator Davies as follows:

L. K. Blood, Standard Oil Company (New Jersey) and H. T. Dodge, The Texas Company, from the European Petroleum Supply Committee; H. E. Pratt, Socony-Vacuum Oil Company, and H. A. Thomas, The Texas Company, from the West Africa Committee; W. F. Dunning, Standard-Vacuum Oil Company, and C. R. Cuddy, California Texas Oil Company, from the Near East and Far East Committee; N. Goddard, Socony-Vacuum Oil Company, and H. A. Hassan, Sinclair Oil Corporation, from the North Africa Committee, and J. P. Berkin, Asiatic Petroleum Corporation, member at large.

Alternates will be: L. C. Quackenbush, Alliance Oil Corporation; H. I. Casteel, Republic Oil Refining Company; R. S. Homet, Socony-Vacuum Oil Company; J. F. Wooler, Atlantic Refining Company; E. J. Smith, Standard-Vacuum Oil Company; W. P. Gaynor, Jr., California Texas Oil Company; W. A. Berryman, Gulf Oil Corporation; B. H. Morris, Valvoline Oil Company, and A. M. Wylie, Anglo-Iranian Oil Company, Ltd.

Technical Meet Held

Challenged by the unprecedented demand for crude oil and by the constantly rising cost of producing it, researchers must apply their methods in both field and laboratory with greater intensity and more systematically, in the opinion of George Roberts, Jr., manager of research for Stanolind Oil and Gas Company, of Tulsa.

Appearing before the third joint technical meeting of Standard Oil Company of Indiana and subsidiaries, in Chicago, recently, he stated that research systematically applied can solve many of the present problems of the industry. Chief among these is that of removing oil from known reservoirs, more efficient uses for natural gases and petroleum other than fuel and lubricant uses, and development of synthetic substitutes for petroleum and its products as a hedge against the possibility of a future petroleum scarcity.

Mississippi
Becomes Major Oil Center

By GEORGE O. IVES, Staff Writer

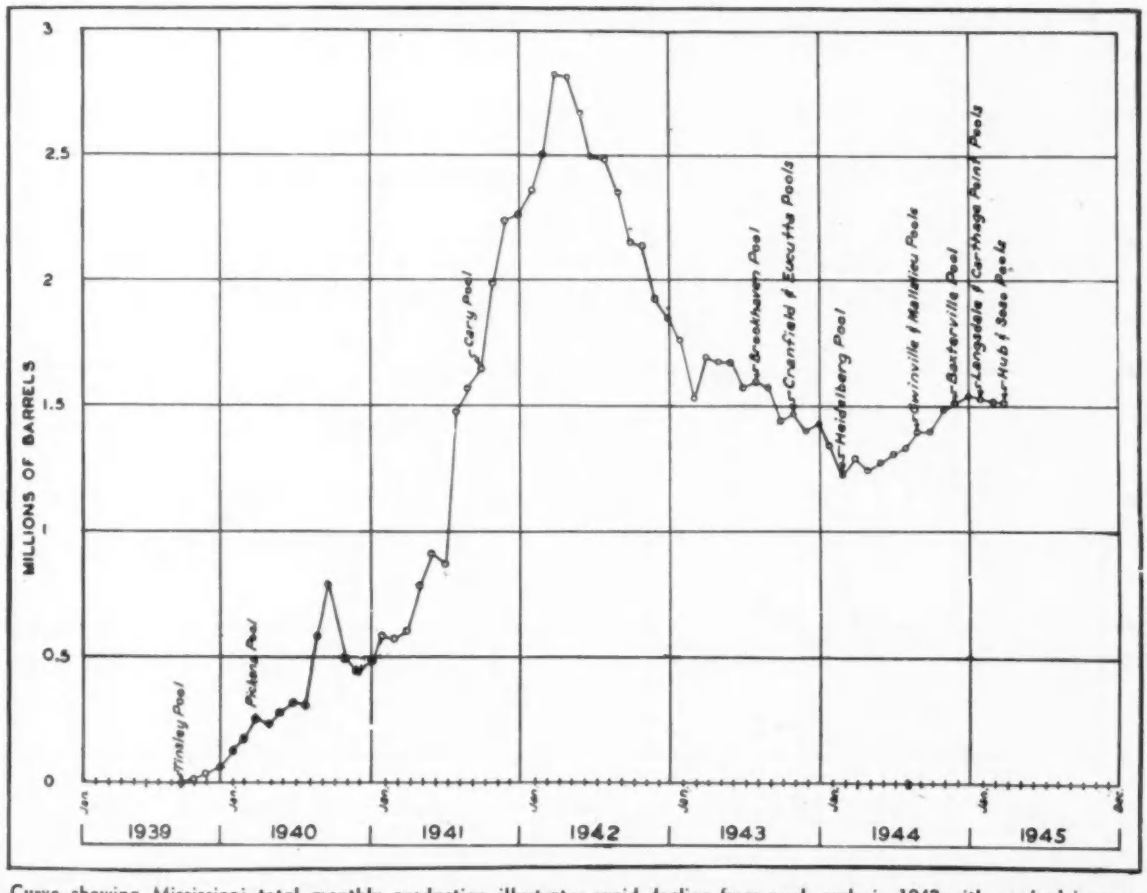
MISSISSIPPI is coming into its own as a major oil province, after several years of exploration and development, the history of which reflects periods of alternate success and disappointment. Since early 1943 it has become accepted as an important area and an overwhelming percentage of the industry sees great promise in its future.

Records from the drilling of many wells, with and without benefit of reliable geophysical information, have contributed geological knowledge within the past two years to replace theories which were largely conjectural in the past, and there is at last emerging a much clearer picture of the geology of the oil-producing region. Differences of opinion still exist on some points of stratigraphy but most geologists have agreed upon the general theory, which is being borne out through additional subsurface information.

New discoveries, more geological information and a wise program of orderly development and conservation assure the state of a lasting place among production leaders of the nation.

In the search for oil, the history of Mississippi roughly parallels that of the Texas Gulf Coast, having gone through the same phases of leasing, exploration, and development, with the important difference that once the industry became genuinely interested in its possibilities, progress has been much more rapid through application of lessons learned in other areas. The many methods developed over a period of years in other areas were developed for particular purposes in many instances in the search for particular types of structures. Mississippi has an advantage in that drilling practices and equipment allow deep drilling from the outset of serious development, the characteristics of the many types of structures which favor accumulation of oil are well known; and it is possible to conduct exploration for the many types concurrently.

That this program was wise is attested by the results. Since discovery of the Tinsley field in 1939, there have been 15 new oil and gas fields opened in Mississippi in addition to two in eastern Louisiana and one in Western Alabama, all in the same geologic province. Outside of Tinsley itself, at least



Curve showing Mississippi total monthly production illustrates rapid decline from peak early in 1942 with gradual increase since early 1944 as development in the 1943-1944 discoveries begin to offset continued decline of Tinsley field production.

two of the new fields are estimated to be good for more than 100 million barrels reserve, with the others ranging up to as high as 50 million barrels each.

As this is written it is apparent that another producing area will be added to the list. Humble Oil & Refining Company is still drilling on its wildcat in the Fayette area of Jefferson County, after having already cored a sand section 64 feet thick in the Massive Tuscaloosa horizon which is regarded as almost certain to open a new gas-condensate field, with possibility that some oil is present in part of the sand.

Completion of the well will be delayed while operators carry it deeper to prospect the Lower Cretaceous formations.

Mississippi has an opportunity to become a model state for development, and should gain the greatest benefit from its resources. Most of its fields were discovered during the period of wartime regulation, and through the Petroleum Administration for War's program of control of materials, drilling has progressed in an orderly manner with 40-acre spacing in oil fields instead of the more congested patterns so often associated with flush new areas. Too, state authorities are interested in sound conservation practices and show every desire to profit by the experiences of other oil-producing states. In this they seem to be joined by the majority of the operators with investments in the area.

Field rules suggested by operators at Mississippi's first state-wide hearing on May 1 showed a desire for orderly development and conservation along lines proven effective in recent years. The proposed regulations embraced provisions for wide spacing and in many instances showed a desire to include compulsory unitization of acreage into tracts suitable for drilling on the prevailing pattern.

The rules also indicated a tendency toward acceptance of methods of allocating production on the basis of producing ability of wells or on the basis of reserves in place.

Thus far the state regulatory body has not issued a special field rule, saying that from evidence at hand there was no occurrence of physical waste in the fields under consideration. It indicated that inasmuch as there had been no objection voiced as to operations under control of Petroleum Administration for War, that no special rules would be issued for the time being.

In the year Tinsley field was discovered, there were only 16 wildcats drilled in Mississippi. The drilling campaign inspired by the state's first commercial oil production resulted in discovery of only one field out of 76 wildcats the following year, and reminded operators that regardless of possibilities of an area, the success of an exploration program is dependent upon more than random drilling, and subsequent operations have been predicated more upon geological and geophysical work. During the five years from 1939 to 1944, a total of 322 wildcats were drilled, opening 12 fields, or a ratio of one discovery in 27 wildcats drilled.

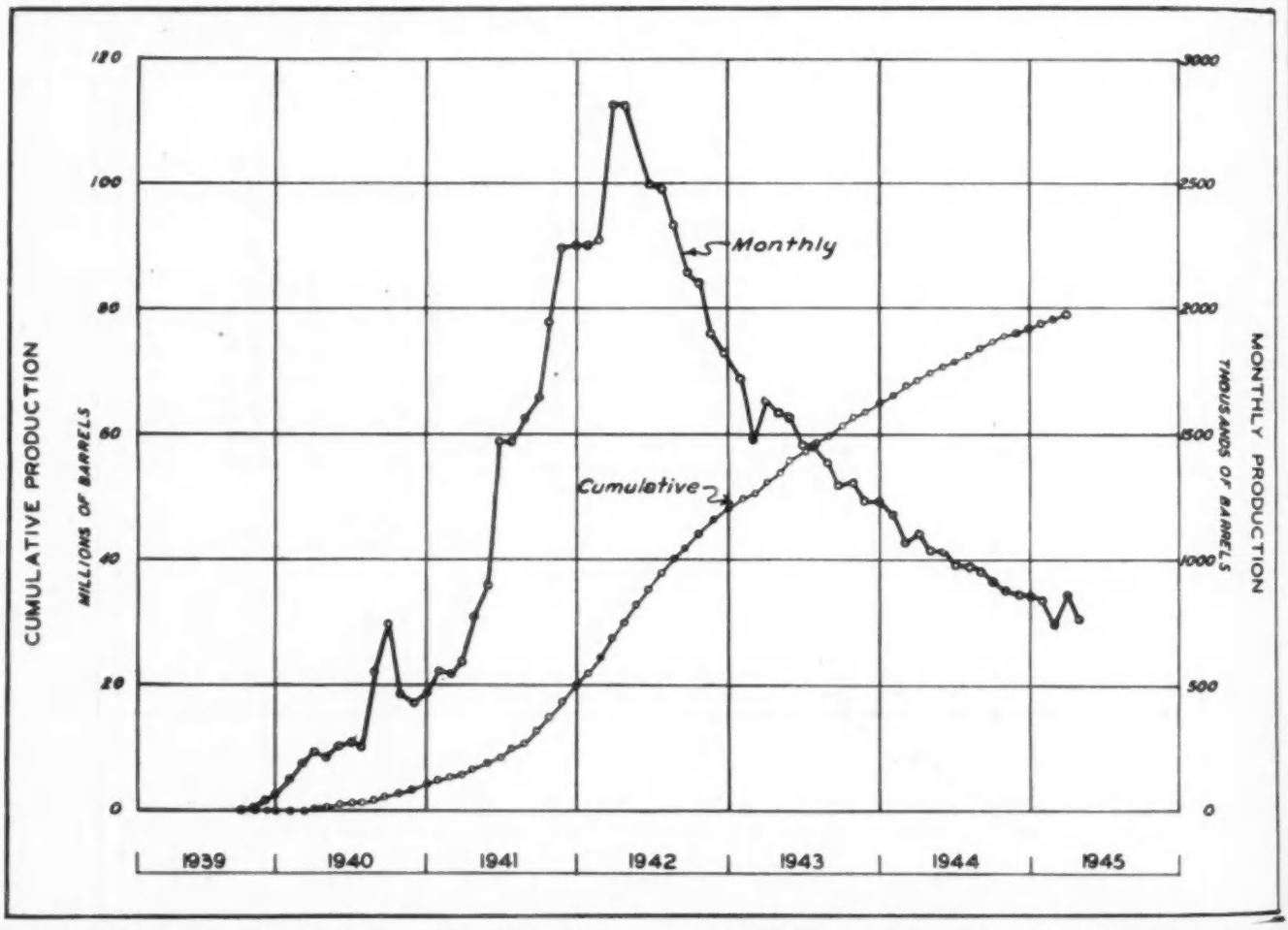
During the first four months of 1945 the ratio has been one discovery in 12 wells, with four new fields opened by the 50 wildcats.

Results of Exploratory Drilling

Year	Total Wildcats	Discoveries	Dry Holes
1939	16	1	15
1940	76	1	75
1941	46	1	45
1942	51	0	51
1943	58	4	54
1944	75	5	70
1945 (1st 4 mos.)	50	4	46
	372	16	356

Tinsley field has produced 79,290,839 barrels of crude through March, 1945, and is estimated to have about 30 million barrels recoverable reserve. The field was developed and produced without restrictions on the rate of production other than those imposed by market and transportation facilities, and much more oil might have been recovered ultimately had it been regulated on the basis of physical waste. However, during the greater portion of the depletion period, it was playing an important part in furnishing crude needed for the war effort, and geographically was in a better position to deliver than some of the more productive states at a time of congested transportation facilities. Its peak production came in March, 1942, when it produced 2,799,437 barrels, or 90,000 barrels daily.

Several of the 1944 discoveries are par-



Monthly and cumulative production from the Tinsley Pool of Yazoo County, Mississippi's first oil field. The rapid and abrupt decline in the monthly production curve is typical of unregulated rates of withdrawal of oil in areas where conservation practices are not in effect.

ticularly noteworthy and of certain effect on the state's economy. Heidelberg would be an important field anywhere because of its reserve. Discovered by Gulf Refining Company in January, 1944, it has already proved in excess of 3000 acres and may go much larger. It is certain to contain between 100 million and 120 million barrels reserve, although the high percentage of connate water in the sand may be considered a basis for reducing this estimate.

Connate water in sands of this reservoir runs as high as 55 percent in some locations, although it will average closer to 40 percent. This field is an outstanding example of the deep-seated, graben type structure, being divided into two distinct segments with a subsea water level of about 4675 feet on the east or discovery side, and 4795 feet on the west side. Production is from the Eutaw sand section of the Upper Tuscaloosa, and the effective sand section averages about 130 feet in thickness. The general practice in the field is to perforate all stringers in a section of 400 to 500 feet and bring wells in as single completions from all stringers. Gas-oil ratios are low and most wells go on the pump immediately after completion.

With the increase in importance of gas and gas-condensate fields during the past few years, the development of substantial gas reserves in the state, of which Gwinville is an outstanding example, is of particular interest. With the expanding market for gas in the eastern states, Mississippi can no doubt obtain the greatest benefit from its gas resources because of geographical position.

Important Gas Reserve

Gwinville, although discovered as late as July of 1944, is already established as the most important gas reserve in the southeastern United States. The few wells completed have proved an area estimated at 25,000 to 30,000 acres in extent, and gas reserves are variously estimated at from 1½ to 2 trillion cubic feet. Although only a fraction of the size of the immense Cartage field of East Texas, its reserve is already thought to be a third as large. It has already proved two distinct gas reservoirs in the Lower Eutaw and Upper Tuscaloosa, and in addition has important oil production from the Massive sand in the base of the Tuscaloosa. Data on the oil reservoir is not yet complete, but the sand section and other information lead to estimates in excess of 25 million barrels. Dual completions are practiced in this field, with the Lower Eutaw-Upper Tuscaloosa zones coming in around 8000 feet, and the Massive at depths around 9000 feet. An outlet has not been established, but major transmission companies are known to have approached operators in the field.

Officials are especially interested in this and similar reservoirs as an opportunity for the state to supply its own needs without importing gas from other states, as has been necessary for some time, particularly since the decline of the Jackson gas field which is now producing only slightly more than 1½ million cubic feet daily from 15 of its original 200 wells. Other potentially important gas-condensate reserves have been opened at Hub in Marion County, Soso in Jasper County, and Carthage Point in Adams County, all 1945 discoveries.

Cranfield, opened in October, 1940, is another 100 million-barrel field, opened in late 1943. The first well was completed in Wilcox sand at 5880 feet, but the Wilcox is thought to cover only a relatively small producing area with only about seven feet of sand. The principal producing horizon is the Massive Tuscaloosa which covers a proven area of about 2500 acres and has a net sand thickness of 80 feet in 130 feet of section. Most of the development is in this zone, and the field shows gas possibilities, since it is a typical gas-cap field, with an oil belt around the flanks. Tuscaloosa pay comes in around 10,300 feet, subsea. Original water level was about 10,065 feet subsea, with gas-oil contact at minus 9976 feet. Practically all the present proven area is under lease by one company, which is developing the properties on a density of one well to 40 acres for oil, and one well to 320 acres for gas and condensite. The field is well adapted for recycling operations, and such may eventually be instituted.

Baxterville Important

Baxterville is another field, the extent of which cannot yet be determined, but which is already of extreme importance due to the thickness of producing sands. It was opened in March, 1945, and on the basis of the first two wells com-

Proven Salt Domes in Mississippi

Does Not Include Undrilled Geophysical Discoveries

COUNTY	Dome	Location	DISCOVERY WELL	Discovery Work By	Discovery Date	TOP DOME MATERIAL		Total Depth
						Cap Rock	Salt	
Claiborne	Bruinsburg*	1-11n-1w	Freeport Sulphur Co.'s Hammett 2	Sun	3-10-44	2055	2065	2090
Copiah	Allen	5-9n-6e	Sun's Case Lumber Co. 2	Sun	3-15-44	2447	2774	2800
	Sardis Church	29-10n-9e	Freeport Suplhur Co. (Drilling)	Sun	5- 4-43	1483	....	2262
Covington	Don't	T-8n-14w	Sun Oil Co. (Drilling)	Sun	1940	....	....	2093
	Richmond	17-6n-15w	Freeport Sulphur Co.'s Beasley 1	Gulf	11-24-44	1650	....	1740
Green	Byrd	16-3n-7w	Gulf's Sshool Land 1	Gulf	7-21-43	....	2119	2135
Hinds	Edwards	35-6n-4w	So. Nat. Gas Co.'s Angelo-Williams 1	S. Nat. Gas	10- -37?	2784	3026	4346
	Halifax	1-7n-4w	Plains Prod. Co.'s Halifax Lumber Co. 1	Gulf	1941	....	....	3990†
Jefferson	Leedo	19-8n-4e	Gulf's Cupit 1	Gulf	6-29-43	1605	2065	2071
	Carson	19-7n-17w	Gulf's Price 1	Gulf	9- 4-43	2318	....	2538
Jefferson Davis	Oakvale	32-6n-19w	Sun's Taylor 1	Sun	11- 6-40	1836	....	1919
	Prentiss	25-7n-19w	Gulf's Blackman 1	Gulf	8- 8-43	2548	....	2686
Jones	Moselle	31-7n-14w	Gulf's Lowery A-1	Gulf	11- 3-43	2120	....	2294
Lamar	Midway	28-4n-13w	Sun's Scanlon-Semmes 1	Sun	10- -37	....	2522	4024
	Tatum	14-2n-16w	Tatum Lumber Co.'s Tatum Fee 1	Tatum	10- -40	....	1500	1976
Lawrence	Arm	8-6n-20w	Humble's Nelson 1	Gulf	1- 7-45	....	1931	7625
	Monticello	35-7n-10e	Gulf's Cox 1	Gulf	9-25-43	2253	2757	2771
Lincoln	Ruth	15-5n-9e	Freeport Sulphur Co.'s Clarke 2	California Co.	7-28-42	2212	....	2710
Marion	Lampton	20-3n-17w	Gulf's Bradshaw 1	Gulf	6-25-43	1365	....	1520
Perry	Richton	T-5n-10w	Exploro Corp.'s W. E. Carter 1	Gulf	10-19-44	532	....	575
Simpson	D'lo	17-2n-4e	Gulf's Blalock-Nichols 1	Gulf	9- 6-42	2090	....	2145
Smith	New Home	5-10n-13w	Gulf's Dykes 1	Gulf	8- 2-43	1832	....	2020
	Glass	6-14n-3w	W. O. Allen's Culley 1	Miss. Geo. Sur.	3- -40	....	4030	4490
Warren	Kings	39-17n-4e	Magnolia's Hall 1	Magnolia	1941	....	....	4176‡
	Newman	12-14n-4e	Magnolia's Broun & Paxton 1	Magnolia	11- -40	....	5119	5401

* Only producing piercement dome in state. Has gas production on west flank. † In cap rock. ‡ In salt.

pleted cannot be given an estimate of less than 50 million barrels ultimate reserve, and this is considered by many to be conservative. It has proved a sand section of 100 feet in the basal or Massive Tuscaloosa, and an additional 62 feet of pay in the Eutaw-Upper Tuscaloosa horizon. The lower pay is productive of heavy, 16-gravity oil, while the upper horizon produces 48-gravity condensate under high gas-oil ratios upward of 300,000-1.

Two of the Salt Basin fields, Holly Ridge and Lake St. John, are in eastern Louisiana, in Concordia and Tensas parishes. Holly Ridge, discovered in August, 1943, was one of the areas directly responsible for the renewed surge of activity in the salt basin area, since it proved Massive sand production as shallow as 8400 feet, at about the same time the Cranfield discovery reached the Massive at about 10,300 feet, and other wells in eastern and southeastern Mississippi were showing good sand bodies indicating deposition of this horizon over a wide area. Holly Ridge is one of the deep-seated domal or anticlinal structures which show no faulting. Production is almost exclusively from the Massive and another less extensive lensing sand, not present in all wells, known as the Penrod sand, about 120 feet above the Massive in the Lower Tuscaloosa. A Wilcox sand at about 3000 feet also yields oil, but is used principally as a source of gas for drilling fuel. With approximately 3200 acres proven, the reserve is about 30 million barrels, average thickness of the Massive sand is about 27 feet.

Lake St. John Field

Lake St. John field, a similar structure, is badly faulted and considerably greater in extent, with the gas-condensate area estimated at near 7000 acres and the oil belt covering an area of about 3500 acres, with a slight overlap of the oil and gas areas. In addition to three stringers of sand in the Wilcox formation, there is a pay in the Upper Tuscaloosa at 8340-70 feet which produces gas with a high recovery of 59.2-gravity condensate, and the Massive Tuscaloosa at 8940 feet. A deep test, The California Company's Applegate 7, has been drilled through the upper portion of the Lower Cretaceous and at total depth of 12,786 feet is believed to be in the Glen Rose, where it is testing a sand at 12,765 feet, having recovered some oil, mud and water on first attempts. This test has definitely revealed some truncation of the Lower Cretaceous.

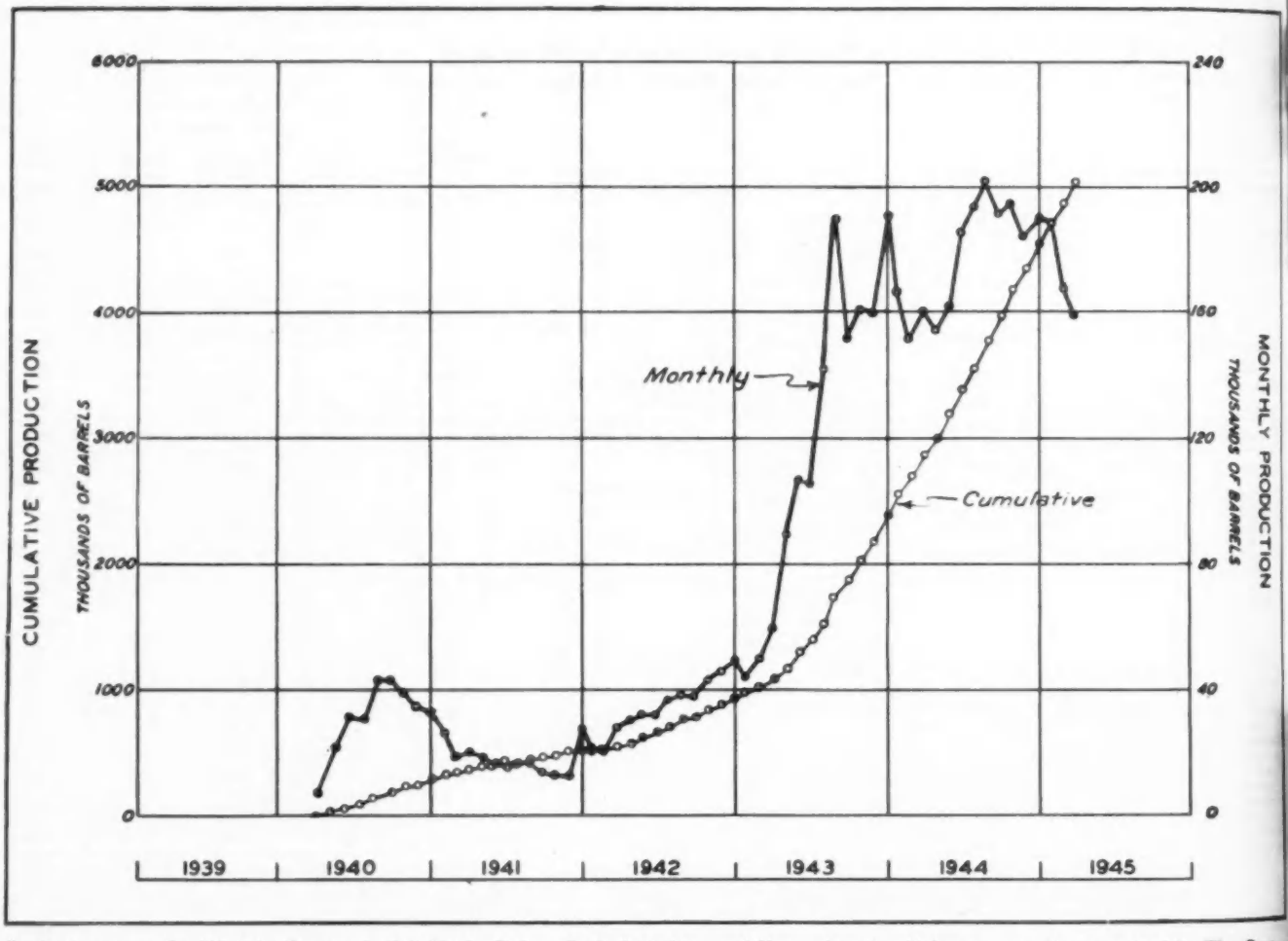
After more than a year of intensive drilling in a number of the newer fields, Mississippi production is beginning to outstrip the capacity of transportation outlets. There are no pipe lines which take any sonsiderable amount of the crude directly to refinery destinations, most being moved by tank car. Even those fields served by pipe lines have such outlets only to loading racks or barge terminals. This should be remedied shortly with completion of Interstate Pipe Line Company's system connecting most of the important salt basin fields for transportation to the Baton Rouge area.

Production of New Fields

It is interesting to note the part which the newer fields are playing in Mississippi's total production. As late as October, 1943, the month in which Cranfield and Eucutta fields were opened, Tinsley was producing a daily average of 41,600 of the state's 46,800 barrels, or 89 percent. Now, with continued decline of Tinsley and increases in other fields, output for the state is approximately 54,000 barrels daily, of which Tinsley is contributing only 27,000 barrels, or 50 percent.

As in the case of oil, the great potential gas producing ability of the state will have to wait for outlets. Aside from the Jackson gas field itself, already tied into its distribution system, and presently unable to supply the demand, the only market is for use as drilling fuel. With no trunk line outlets, even this use is restricted more or less to operations in fields where the gas is produced.

Drilling equipment in use is of conventional types, with both heavy and medium-duty rigs employed. Most of the wildcatting is concentrated in the central and southern portion, and wells are projected to test the Massive Tuscaloosa section at least, and in many instances to go into the Lower Cretaceous. Consequently, heavy-duty rigs ca-



Production curves for Mississippi's second oil field, the Pickens Pool of Madison and Yazoo Counties. Voluntary proration practiced by The Carter Oil Company in this Pool will result in a gradual decline from peak production rather than an abrupt drop as is shown for the Tinsley Pool.

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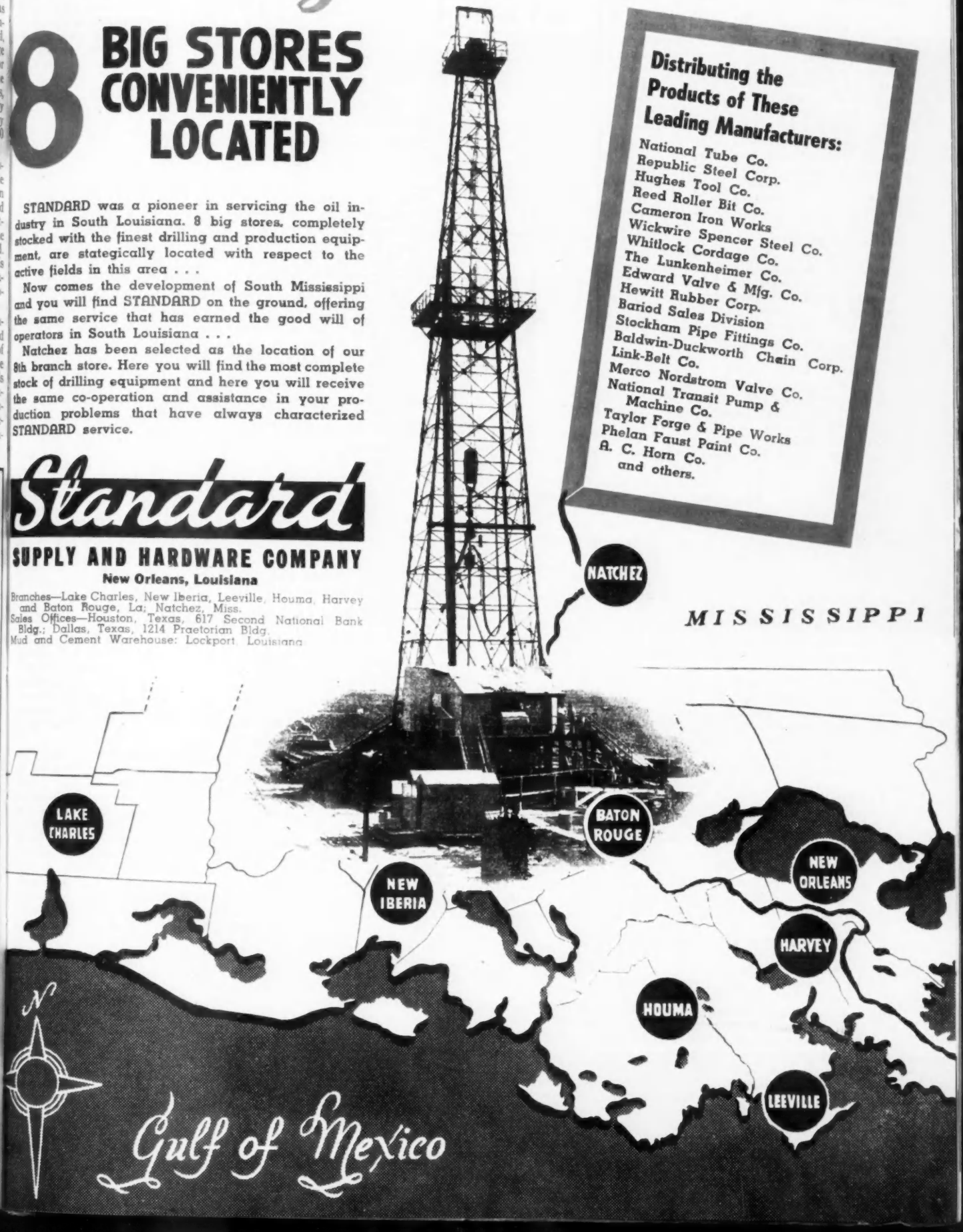
and others.



pable of going to 10,000 feet or more are in wide use on exploratory tests. Some of the fields now under intensive development notably Heidelberg, Eucutta and Pickens, do not require especially heavy equipment, and light rigs capable of drilling 6000 to 7000 feet are widely used. There is a marked trend toward power rigs, both butane and diesel, with butane the most popular. This is particularly true in exploratory drilling, where no gas is available and fuel oil presents a critical transportation problem. Butane rigs are also widely used in the fields where there is little gas. Areas such as Cranfield, Gwinville, Baxterville, Hub, Holly Ridge, and Lake St. John will have sufficient gas available for drilling fuel.

Practically all of the present production is within the Mississippi Salt Basin, the geologic province which covers an area extending from the Holly Ridge and Lake St. John fields in eastern Louisiana, across Mississippi to the Gilbertown field in western Alabama. It trends southeasterly from Yazoo County on the northwest, roughly on a line through Clarke County, in a belt extending as far south as Pearl River and Stone counties and possibly farther.

Geologically, it is bounded on the east and northeast by the effects of the Appalachians, on the north by land mass plus Lower Cretaceous igneous highs, and doubtless connects on the west with the north Louisiana basin. Within this area are located all of the known and proven salt domes.

Geologists generally agree on a truncation of the Lower Cretaceous formations on the west side with erosion to a broad, low-relief plain, possibly caused by igneous uplifts such as the Appalachians, the Sharkey Platform, Epps Uplift, and similar features. Later a shallow regional sea allowed terrestrial deposits of gravels, coarse sands, and conglomerates forming the Massive sand of the Upper Cretaceous from which much of the important production comes. This cycle was completed by deposition of the Marine Tuscaloosa.

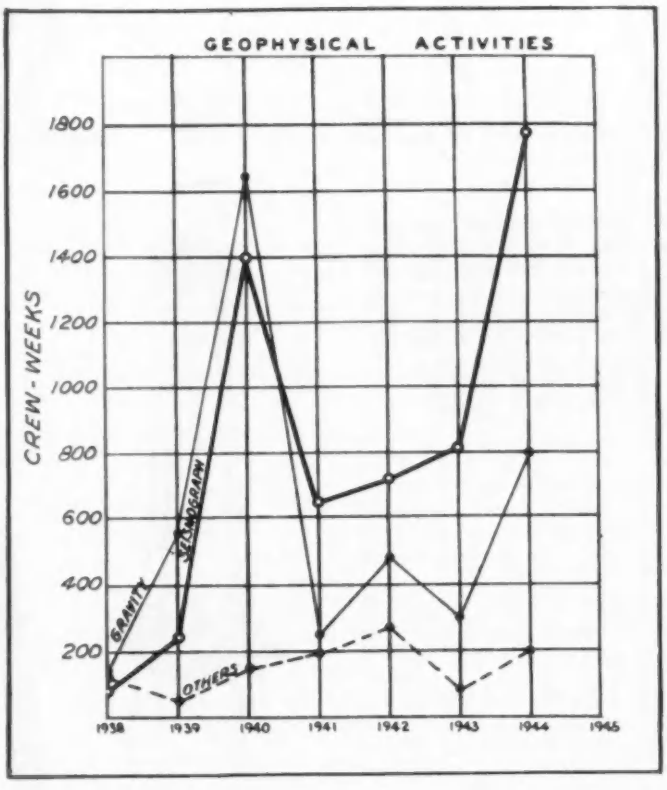
The deposition of the Upper Tuscaloosa is believed to be detrital from volcanic sources to the north, and shows progressive up-dip overlap by successively younger formations such as the Eutaw and Selma. This was followed by the Eocene era deposition of the Midway, Wilcox, etc.

Structures to date have been of four types:

1. Anticlinal or domal with minor faulting, such as Lake St. John; Cranfield.
2. Deep-seated or graben type domes such as Heidelberg, Eucutta, Gwinville and Baxterville. These are strikingly similar to the Texas-Louisiana coastal structures.
3. Faults such as Pickens, Langsdale, and Gilbertown. Faults showing accumulations are all on upthrown side which is upthrown coastward downdip. (This is opposed to usual conditions on the Texas Gulf Coast.)
4. Truncated and stratigraphic traps, such as Cary in Sharkey County, more important as a type than as an individual.

Most producing areas to date have been on gravity minima, suggesting a relationship with salt movement. Gilbertown and Cary are exceptions.

The age of salt uplifts vary, all known piercement types seem to be Wilcox or younger, while deep-seated types may have started around Lower Cretaceous time, with or without continued growth. To some geologists, present data indicates movement on all piercement type domes since Wilcox time.



Graphs showing annual geophysical activity in Mississippi since 1938. Note the two periods of intense activity reflected by the curves, the first in 1940 following the discovery of the Tinsley Pool, and the second in 1944 the peak of which has not yet been reached.

The present trend of geophysical and geological exploration shows a search for additional structures of the types now proven, with an outlook toward Lower Cretaceous possibilities. There have already been showings in that formation, one in particular which was tested in the discovery well for the Brookhaven field. This well had Lower Cretaceous at 10,328 feet, and had showings at 10,818-823 feet which were tested but recovery showed heavy oil and salt water which were never successfully separated for production.

Southern Area Possibilities

Geologists familiar with the region count among the additional possibilities, the southern or basinward territory, where are present favorable marine shales which have been pretty well sanded out to the north. There is possibility of faulting and other structural conditions in the Lower Cretaceous which may not be apparent in Upper Cretaceous. However, there is little reliable control, and once past the Massive Tuscaloosa sand section, correlation is almost impossible.

A normal Lower Cretaceous section consists, from top to bottom, of Paluxy, Glen Rose, Travis Peak, Cotton Valley, Buckner and Smackover. The fact that the marine shales northward become sands at the shoreline, causes confusion in lithology.

Showings in the Smackover lime in a wildcat drilled by The California Company in Issaquena County created no little interest and led to considerable leasing and exploration beyond the northern edge of the salt basin. However the well itself proved unproductive, the formation being locally too hard and tight to produce, even though it contained some heavy oil. Other than this one well, there seems to be little or no control upon which to base any idea of possibilities of Smackover lime production. Union Producing Company had drilled a deep test in Clarke County, Alabama, which reported Smackover lime between 11,500 feet and 12,000 feet; and several wells in Mississippi, particularly in Newton and Neshoba counties, are thought by some to have drilled Smackover, although there is still some doubt as to whether the formation was actually identified in the two latter areas. The logical belt along which this formation might be played extends across Mississippi from Lauderdale County on the east, through Newton, Neshoba, Leake, Attalla, Holmes, Humphreys, Sharkey, Washington, and Issaquena counties.

More control is needed before any decision can be made as to possibilities in the Smackover. It still must be definitely proven that porous oolitic Smackover lime is present in Mississippi. A important well, Union Producing Company's Jennie Stevens 21, now drilling in the Tinsley field, is already deeper than any other well yet drilled in the field itself, and now in the lower portion of the Lower Cretaceous formation. It should shed more light on Smackover possibilities.

Four Producing Formations

All present production in the basin is from one of four formations: Wilcox, Selma, Eutaw, and Tuscaloosa. In the opinion of many observers familiar with the area, prospecting for the Lower Cretaceous formations will have to await much deeper drilling in the southeastern portion of the basin.

Historically, the cycle of exploration in Mississippi is much the same as in the Texas Gulf Coast, except that it is more concurrent, without the time lapse

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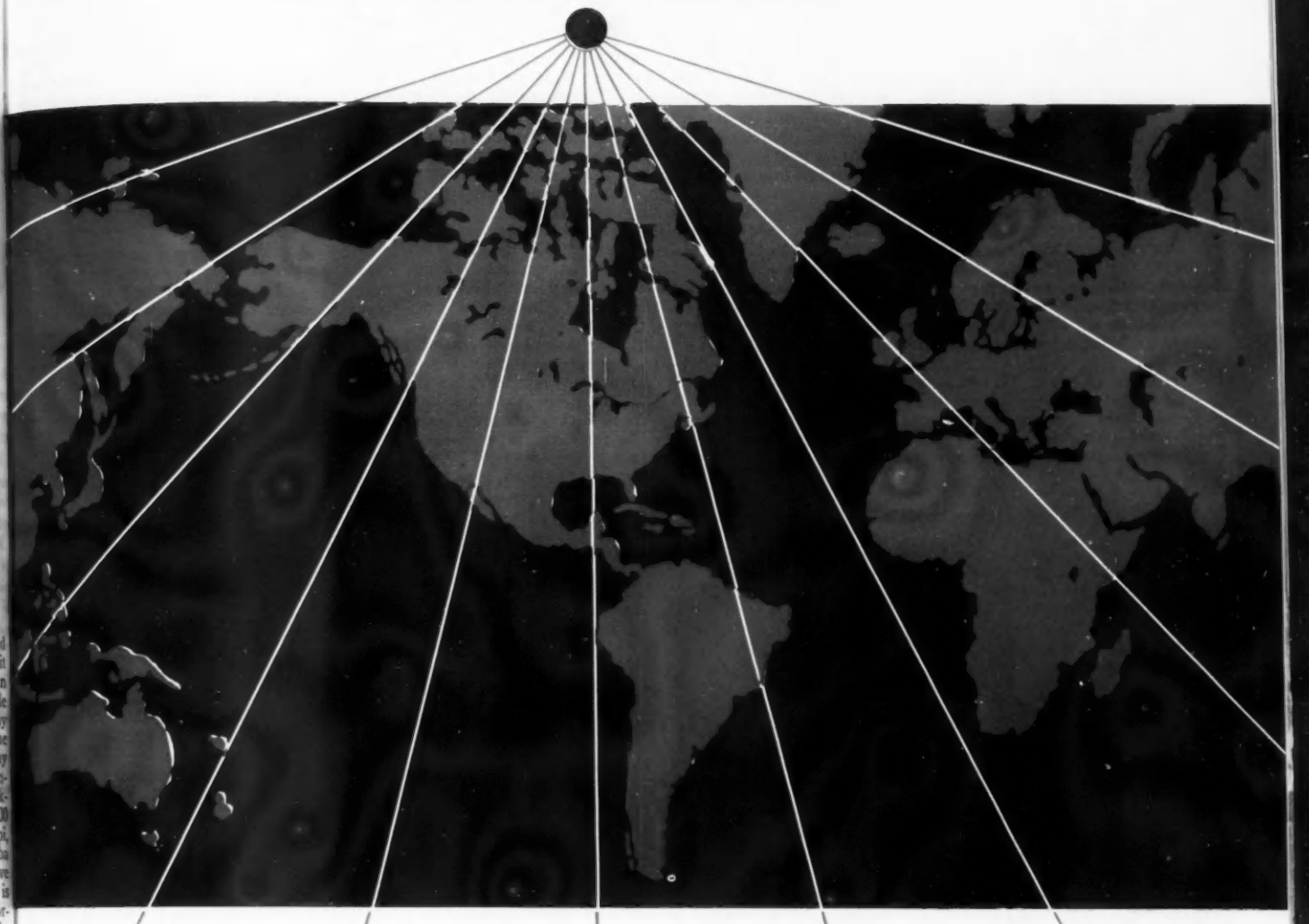

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such as that between discovery of Spindletop and later types. In the coast the cycle ran from shallow piercement type domes, then to deep-seated domes, and later to fault-line and stratigraphic traps. In Mississippi exploration for all the various types is now going on at the same time but started out with piercement type domes as at Midway in Lamar County, drilled by Sun Oil Company in 1937 and 1938. Four flank wells were drilled, one of which pulled a number of cores containing heavy asphaltic oil. This phase is still going on, salt domes being found with gravitymeter exploration, 25 having been proved to date, and flank drilling in progress in search of Wilcox and Cretaceous production. The only production on this type structure is the shallow gas developed in the Moody Branch formation at Bruinsburg dome in Claiborne County by Sun Oil Company in 1944.

However, several companies are interested in flank possibilities around these domes, doing some intensive geological work in an effort to delineate the contacts on the various Tuscaloosa formations.

Deep-Seated Dome Search

The second phase, also still in progress, is the search for deep-seated domes usually expressed as graben-type faulting. This category covers many structural types, and includes Tinsley, Heidelberg, Eucutta, Gwinville, Baxterville, and others.

The exploration for faulted and stratigraphic traps was the third and latest phase in the Gulf Coast of Texas, but is running concurrently in the southeastern states with other phases. Pickens, Gilbertown, and Langsdale, are examples of this structural type among producing fields.

In Mississippi, through experience gained elsewhere, there is no trend toward exhaustion of each phase before going on to the next. The use of geophysics also reflects a familiar cycle of gravity work, refraction, and reflection seismograph. Many anomalies picked up with gravity meters were subsequently worked with reflection seismograph, although as a whole it appears that the seismograph is not yet as effective in Mississippi as in the coastal regions of Texas and Louisiana.

Of an area approximately 30 million acres, there are now an estimated 10 million acres under lease for oil or gas. Here again the lease history is much like any other new oil province. Early leasing was reconnaissance blocking, either ahead of, or following, gravity meter work. Early prices were low and blocks of thousands of acres were taken. It is still active, with much new acreage being bought, but has setled down to more selective buying and filling in blocks previously assembled.

After the discovery of Tinsley in 1939 and Pickens in early 1940, the heightened interest in the area plus the cheap acreage available seemed to place the state well on the road to becoming one of the principal oil centers, but the number of dry wildcats dampened enthusiasm and many operators attracted by the first oil production left the state. A number of companies which had opened offices there either closed them or left skeleton forces only. The failure of the wildcat program through 1941, 1942, and 1943 is credited to an apparent misinterpretation of early seismic work, plus the fact that many wells were drilled without particular geological or geophysical merit but only became blocks of acreage were available.

Late in 1943, following discovery of Eucutta, Brookhaven, Cranfield, and Flora, the companies started moving back, work of all kind was accelerated, and Mississippi was firmly established. There is now no doubt that it has taken its place among the major oil states. However, though the general outlook is optimistic, operators realize that the state has a long way to go and many problems to solve. The important thing to them is that the state, particularly the salt basin portion, has sediments proven for oil production which extend over large areas, attested by the drilling of many wildcats and discovery of many fields. The business of discovering and developing these reserves will make Mississippi active for years. The low gravity of the oil found in some fields is discouraging, but it is still usable and has a market.

Although subsurface control is still limited, with large areas in which no deep wells have been drilled, the state has an advantage over most new territories in that the average wildcat is deeper, and adds materially to the knowledge of the stratigraphy of the region.

A continuation of the heavy drilling campaign is assured as to field development as well as wildcatting. A number of the recent discoveries will require a substantial amount of drilling before the areas are fully defined and evaluated, and a number of wildcat prospects where one or more wells have been drilled will require more drilling before the prospect is either condemned or proved.

The position of importance given the state by the industry is indicated by the geophysical activity. There are now 92 crews active in the area, including seven core-drill outfits. A year ago there were 53 crews working the state, and two years ago there were only 27. This reflects an increase of 240 percent in the two years since April of 1943.

Perhaps more significant than the increase in volume of work is the fact that two years ago the geophysical exploration was being done by 13 companies, whereas today 34 are actually doing geophysical work in Mississippi.

With geophysical activity at an all-time high; with more than 75 drilling rigs running; with estimates that reserves now are more than five times what they were at the beginning of 1944, and with prospects of the first trunk pipe line outlet for the state being constructed soon, Mississippi can look forward to maintaining its recently assumed place among the major oil states in the Union.

Acknowledgment

We are grateful for the cooperation of operators, oil company personnel, and others whose assistance has been invaluable in preparing this article. We are especially grateful for the assistance rendered by George A. Musselman, assistant division geologist, Southern Division of The Carter Oil Company, Jackson, Mississippi, who prepared the illustrations in addition to furnishing information.

Historical Sketches of Mississippi Fields

ADAMS COUNTY

CARTHAGE POINT

Five miles sw of Natchez, Township 6n-3w. **Discovery Data:** Reflection seismograph, The Pure Oil Company, 1941. **Discovery Well:** The Pure Oil Company's J. M. McDowell 2, completed January 12, 1945. **Structure:** Probably deep-seated salt dome. No salt drilled. Elevation 63 ft. **Producing Formation:** Massive Tuscaloosa sand. Perforations at 10,276-283 ft, average sand thickness 40 ft. **Deepest Test:** Discovery well, 12,149 ft where it was 1750 ft into Lower Cretaceous. **Proven Area:** 80 acres (nominal). **Production:** 9556 barrels through March, 1945, 3709 barrels during March. **Estimated Reserve:** Insufficient data, probably 400,000 barrels on acreage proved. **Gravity of Crude:** 54 degrees. **Outlet:** Tank trucks. **Principal Leaseholders:** The Pure Oil Company, Humble Oil & Refining Company.

CRANFIELD

Fourteen mi e of Natchez, near e line of Adams County, Township 7n-1w. **Discovery Data:** Reflection seismograph, The California Company. **Discovery Well:** The California Company's National Gasoline Company 1 completed October 4, 1943. **Structure:** Deep-seated salt dome, no salt drilled to 5-1-45. **Elevation:** 350 ft. **Producing Formations:** Wilcox at 5880-5884 ft. Average thickness 7 ft; Massive Tuscaloosa sand at 10,300 ft. Average thickness 80 ft. **Proven Area:** 2500 acres. Has gas-condensate cap with oil belt around flank of dome. **Production:** March, 1945: 123,300 bbls cumulative, 869,231 bbls. Estimated reserve, 50,000,000 bbls. **Producing Wells May 1, 1945:** 19, flowing. Rigs running May, 1945. **Gravity:** Oil, 39-40, Condensate, 54-56. **Deepest Test:** The California Company's L. G. Ratcliffe 4, td 10,475 ft in Lower Cretaceous. **Principal Leaseholders:** The California Company, Gulf Refining Company. **Remarks:** Wilcox pay covers only small area of field, and has only 3 producing wells. Field is considered of suitable type for cycling but no installation planned as of May, 1945.

CLAIBORNE COUNTY

BRUINSBURG

Ten miles w of Port Gibson on Mississippi River, Section 4-10n-3e. **Discovery Data:** Sun gravity meter, first dome material drilled by Freeport Sulphur Company's Hammett 2, 3-10-44. **Discovery Well:** Sun's Hammett A-1, completed 11-29-44. **Structure:** Piercement type salt dome, top salt 2065 ft, elevation 90 ft. **Producing Formation:** Moody Branch at 930-62 ft. **Proven Area:** 80 acres. **Production:** Dry gas for fuel. **Estimated Reserve:** Insufficient data. **Rigs Running:** None. **Principal Leaseholder:** Sun Oil Company. **Remarks:** This is the only production of oil or gas in Mississippi on a piercement salt dome.

CLARKE COUNTY

LANGSDALE

Extreme se cor Clarke County, Sec 30-1n-18e. **Discovery Data:** Surface geology. **Discovery Well:** Kirby Petroleum Company's Long Bell Petroleum Company 1, completed January 20, 1945. **Structure:** Fault, elevation 236 ft. **Producing Formation:** Upper Eutaw sand at 3649-62, 3696-3710 and 3728-40 ft. Average thickness 40 ft. **Number of Producing Wells:** 4. **Rigs Running:** 2. **Production:** 5322 bbls through March, 1945. **Proven Area:** 200 acres. **Estimated Reserve:** 500,000 bbls. **Outlet:** 4-in pipe line to loading rack at Gilbertown. **Principal Leaseholders:** Kirby Petroleum Company, Sinclair-Wyoming Oil Company.

HINDS AND RANKIN COUNTIES

JACKSON (Gas)

At city of Jackson on Hinds-Rankin County line. **Discovery Data:** Surface geology by U. S. G. S., 1917. **Discovery Well:** Cleve Love's Mayes 1, completed in February, 1930. **Structure:** Igneous plug, on Vicksburg-Jackson monocline. Elev 270-370 ft. **Producing Formation:**

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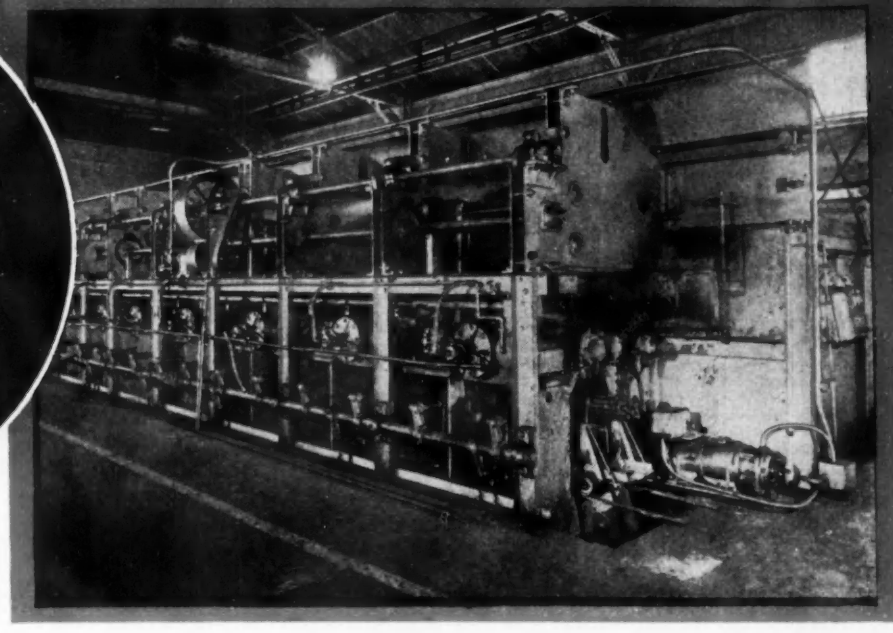

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SERVING THE OIL AND GAS INDUSTRIES

Selma at 2100 ft subsea. Average thickness 15 ft. **Proven Area:** 7600 acres. **Producing Wells:** 15 out of original 200. **Production:** 51,342 mcf during March, 1945. Cumulative production 116,000,000 mcf. **Estimated Reserve:** 5,000,000 mcf plus. **Deepest Test:** 5560 ft, reached Cotton Valley of Lower Cretaceous, found Eutaw missing, and very little Tuscaloosa present. **Principal Leaseholders:** Originally owned by Home Oil Company and Gulf Refining Company who sold gas rights to United Gas Company. **Remarks:** A very little heavy, 14.5-gravity oil has been found on the flanks in the southern part of the field, but never in commercial quantities. Gas reserves now almost entirely depleted.

JASPER COUNTY

HEIDELBERG

At town of Heidelberg in se cor Jasper County, Township 1n, Ranges 12e and 13e, Township 10n-10w and 11w. **Discovery Data:** Gravity meter and reflection seismograph detail work in area previously leased on surface indications. **Discovery Well:** Gulf Refining Company's Helen Morrison 1, completed January 27, 1945. **Structure:** Deep-seated dome with complex, graben-type faulting, dividing field into e and w segments. Elevation 360 feet. **Producing Formations:** Several sands in Eutaw between top of porosity at 4370 ft and water level at 5035 ft on e side and 5155 ft on w side. Average effective sand thickness 133 ft, connate water upward of 50 percent. **Deepest Test:** Gulf's Morrison 1, 6576 ft in Basal Tuscaloosa. **Proven Area:** 3200 acres. **Producing Wells:** 76 on 4-1-45. **Production:** March, 1945, 276,308 bbls. Cumulative through March 1945, 2,228,899 bbls. **Estimated Reserve:** 100,000,000 bbls. **Gravity Oil:** 23 degrees. **Outlet for Oil:** 25-car loading rack on N. O. & N. E. RR. **Principal Leaseholders:** Gulf, Fohs, Frankel & Frankel, Rogers Lacy, P. G. Lake, Midstates, Sun. **Remarks:** Very little reservoir energy, most wells go on pump immediately, and present reserve estimates may prove optimistic with longer record of field performance.

SOSO

Southwest cor of county, Section 27-10n-13w. **Discovery Data:** Gravity meter. Gulf Refining Company. **Discovery Well:** Gulf Refining Company's Edwards-Bailey Unit 1, completed March 6, 1945. **Structure:** Probably deep-seated salt dome. Elevation 280 ft. **Producing Formation:** Eagleford sand in Eutaw, average thickness 20 ft, depth 6590 ft. **Proven Area:** 320 acres. **Production:** Shut-in gas well. Estimated reserve, insufficient data but probably 10,000,000 mcf. **Deepest Test:** Gulf's Edwards-Bailey 1, 8153, basal Tuscaloosa. Had Massive sand at 7875 ft. **Principal Leaseholders:** Gulf Refining Company. **Remarks:** Further development required to evaluate importance of this new field. Appears unimportant on basis of present data.

JEFFERSON DAVIS COUNTY

GWINVILLE

Township 9n, Ranges 18 and 19w, near town of Gwinville, northern part of county. **Discovery Data:** Gravity meter and reflection seismograph. **Discovery Well:** S. W. Richardson's C. E. Berry 1, completed July 26, 1944. Oil production in Massive sand opened by Gulf's Mullins 1, December 17, 1944. **Structure:** Faulted Anticline, probably deep-seated dome. Average elevation 475 ft. **Producing Formations:** Lower Eutaw-Upper Tuscaloosa at 8000 feet. Massive Tuscaloosa sand at 9220 ft. Average thickness of sand, 70 ft in upper gas-distillate pay; 27 ft in Massive oil sand. **Proven Area:** 25,000 acres. **Production:** March, 4058 bbls. Cumulative 13,924 bbls, 29,200 mcf gas. **Estimated Reserve:** Oil 50,000,000 bbls, gas 1½ to 2 trillion cu ft. **Producing Wells:** 3. **Rigs Running:** 3. **Outlet:** Tank truck. **Deepest Test:** Superior's Thompson 1, 12,629 ft Lower Cretaceous, probably in Glen Rose. **Gravity of Oil:** 40 degrees from Massive sand. **Principal Leaseholders:** Gulf, Humble, Superior, Magnolia, Sun, Tide Water, Richardson, Fohs. **Remarks:** Extent of oil producing area not defined but is already considered the most important gas reserve in Southeastern United States. Needs outlet for gas.

LAMAR COUNTY

BAXTERVILLE

Southwestern cor of county in Township 1n-16w. **Discovery Data:** Gravity meter, reflection seismograph, Gulf Refining Company. **Discovery Well:** Gulf Refining Company's C. V. Cooper 1, completed November 18, 1944. **Structure:** Deep-seated dome, faulted, elevation 220 ft. **Producing Formation:** Upper Tuscaloosa 7796-7858 ft Massive sand in base of Tuscaloosa 8725-8839 ft. Average thickness of sand, 62 ft in Upper Tuscaloosa; 100 ft in Lower or Massive sand. **Proven Area:** 80 acres. **Production:** March 9798 bbls, cumulative production 17,886 bbls. Estimated reserve, 50,000,000 bbls. **Producing Wells:** 2. **Rigs Running:** 4. **Deepest Test:** Superior's Batson et al 2, 10,505 ft, Lower Cretaceous. **Gravity of Oil:** 16, from Massive sand, 48.5 from Upper Tuscaloosa. **Principal Leaseholders:** Gulf, Superior, Humble, Sun. **Remarks:** Another relatively new field with thick sand bodies which will require further development before making true evaluation.

LINCOLN COUNTY

BROOKHAVEN

Five mi nw Brookhaven, Section 4-7n-7e. **Discovery Data:** Reflection seismograph, The California Company. **Discovery Well:** The California Company's G. T. Smith 1, completed June 1, 1943. **Structure:** Deep-seated salt dome, no salt drilled to 5-1-45. **Elevation:** 492 ft. **Producing Formation:** Massive sand in Basal Tuscaloosa, perforations at 10,138-175 ft and 10,288-322 ft, average thickness of sand 40 ft. **Proven Area:** 40 acres by the 1 well. **Production:** March, 1945, 1023 bbls, cumulative production 22,231 bbls. Estimated reserve, 500,000 bbls. **Deepest Test:** The California Company's Hettie Smith et al 1, 12,843 ft in Lower Cretaceous. Showings were found at 10,818-23 ft, but did not produce when tested. **Producing Wells, 5-1-45:** 1. **Gravity of Crude:** 24. **Outlet:** Tank truck. **Principal Leaseholders:** The California Company. Sun Oil Company.

MALLALIEU

Seven mi se of Brookhaven, Section 10-6n-8e. **Discovery Data:** Reflection seismograph, The California Company. **Discovery Well:** The California Company's W. C. Douglas 1, completed August 24, 1944, making 374 bbls daily from perforations 10,520-560 ft. **Structure:** Probably deep-seated dome, elev 479 ft, no salt. **Producing Formations:** Massive Tuscaloosa sand, 10,520-558 ft and 10,570-582 ft, average thickness of sand, 40 ft. **Production:** March 12,030 bbls, cumulative production, 60,488 bbls. **Proven Area:** 120 acres. **Estimated Reserve:** Insufficient data, probably 2,500,000 bbls on drilled area. **Deepest Test:** The California Company's Nordan 1, 11,700 ft Lower Cretaceous. **Producing Wells:** 3. **Rigs Running:** 4. **Outlet:** Interstate Pipe Line Company. **Principal Leaseholders:** California Company, Humble, Wanete Oil Company, Sun.

MADISON COUNTY

FLORA

Section 2-8n-1w. **Discovery Data:** Seismograph, Union Producing Company. **Discovery Well:** Love Petroleum Company's Anderson 2, completed September 7, 1943. **Structure:** Anticline, low relief. **Producing Formation:** Selma, 4357-67 ft, average sand thickness 8 ft, 1 producing well. **Proven Area:** 40 acres. **Production:** March 66 bbls. Cumulative 10,311 bbls. **Estimated Reserve:** Negligible. **Gravity:** 25 degrees. **Remarks:** Only 3 producers were ever completed in the field, and all but the discovery itself have been abandoned. Peak production for the field was in October, 1943, when it produced 1910 bbls.

MADISON AND YAZOO COUNTIES

PICKENS

Five mi sw of town of Pickens, on Yazoo-Madison County line. Townships 11 and 12n, Ranges 2 and 3e. **Discovery Data:** Reflection seismograph, Kingwood Oil Company. **Discovery Well:** Kingwood Oil Company and Exchange Oil Company's Wilburn 1, completed April 22, 1940. **Structure:** Fault, accumulation on upthrown, downdip side. Elevation 220 ft. **Producing Formation:** Eutaw (Wilburn sand) 4836-4884 ft. Average thickness of sand 25 ft. **Proven Area:** 1700 acres. **Production:** March, 180,046 bbls. Cumulative, 5,070,425 bbls. **Producing Wells:** 43. **Estimated Reserve:** 13,000,000 bbls. **Rigs Running:** None. **Gravity:** 40. **Deepest Test:** Carter Oil Company's Jones-Massey 1, 6464 ft in Lower Cretaceous. **Oil Outlet:** 60-car loading rack. **Principal Leaseholders:** Carter Oil Company, Sinclair-Wyoming, Phillips. **Remarks:** Discovery well for this field was located in Yazoo County, and the field originally appeared to cover only a relatively small area, but early recoveries indicated drainage from the southeast, and C. L. Morgan drilled his Whitworth 1, 2½ miles southeast of the field proper and topped a 66-ft sand body at 4824 ft. Area was carried as a separate field until steady development showed them to be a single reservoir.

MARION COUNTY

HUB FIELD

Nine mi se of Columbia, Section 15-2n-18w. **Discovery Data:** Gravity meter, reflection seismograph. **Discovery Well:** Humble Oil & Refining Company's A. Evans 1, completed 3-3-45. **Structure:** Deep-seated salt dome, no salt drilled to 9554 ft. Elevation 130 ft. **Producing Formation:** Sand stringers above Massive Tuscaloosa, 9066-9129 ft, average sand thickness 51 ft. **Proven Area:** 80 acres by 1 gas-distillate well. **Production:** Boiler fuel and 481 bbls condensate. **Estimated Reserve:** Insufficient data, probably 10,000,000 mcf. **Rigs Running:** 1. **Deepest Test:** Humble's Evans 1, 9554 ft in Lower Cretaceous. **Producing Wells:** 1. **Outlet:** Tank truck. **Principal Leaseholders:** Humble and The California Company. **Remarks:** First well considered a gas well with small incidental condensate production. Oil may be found in other wells.

SHARKEY COUNTY

CARY

Just s of town of Cary, Section 23-11n-7w. **Discovery Data:** Gravity meter, reflection seismograph, British American Oil Producing Company. **Discovery Well:** British American's Houston A-1, completed July 31, 1941. **Structure:** Anticline, elevation 95 ft. **Producing Formations:** Selma at 3278 ft. Average thickness of sand 5 ft. **Proven Area:** 40 acres. **Production:** March, 1945, 576 bbls. Cumulative, 44,664 bbls. **Number of Producing Wells:** 1. **Rigs Running:** 1. **Deepest Test:** British American's Houston 3, still drilling at 7863 ft in Lower Cretaceous. **Estimated Reserve:** 25,000 bbls. **Gravity of Oil:** 25. **Principal Leaseholders:** British American Oil Producing Company. **Remarks:** Considered unimportant as source of crude unless presently drilling deep well should find deeper pays. One other producer besides the discovery had been completed, since abandoned.

WAYNE COUNTY

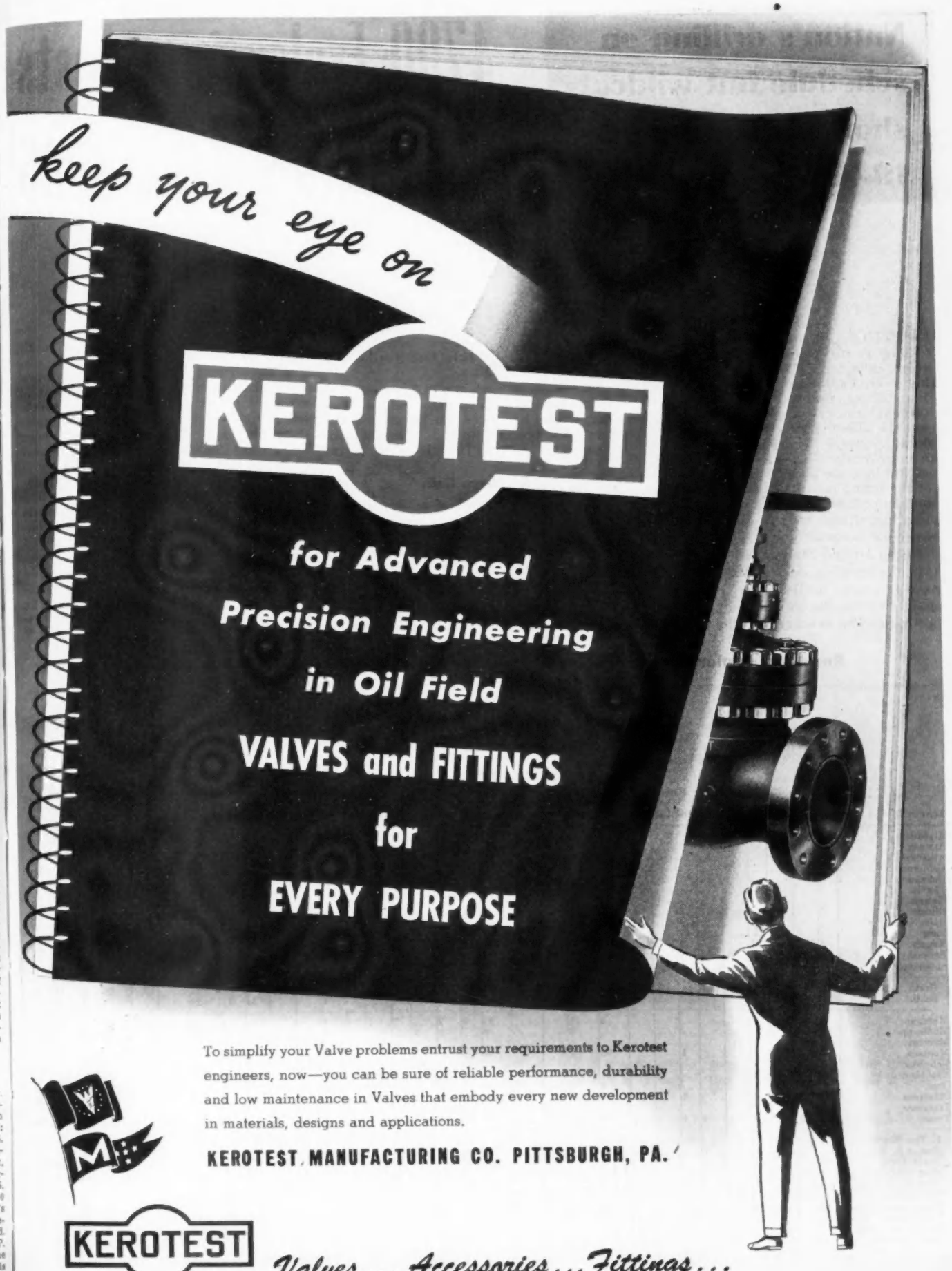
EUCUTTA

Northwest cor Wayne County, Townships 9 and 10n, Range 9w. **Discovery Data:** Gravity meter, seismograph, Gulf Refining Company, and others. **Discovery Well:** Gulf Refining Company's Aden Davis 1, completed September 3, 1943. **Structure:** Deep-seated salt dome, badly faulted. Elevation 306 ft. **Producing Formations:** Eutaw sand at 5000-5135 ft. Average thickness 85 ft. **Producing Wells:** 48. **Proven Area:** 2000 acres. **Production:** March, 1945, 155,096 bbls. Cumulative production, 842,910 bbls. **Estimated Reserve:** 50,000,000 bbls. **Rigs Running:** 6. **Deepest Test:** 7100 ft Paluxy. **Oil Outlet:** 6-in pipe line to 20-car loading rack on GM&ORR. **Gravity:** 19-22. **Principal Leaseholders:** Gulf Humble, Sun, Magnolia. **Remarks:** Gulf has had small amount of production in two wells in the Lower Tuscaloosa at 6666-7095 ft, but both have been abandoned. This is another badly faulted field with very little reservoir energy and wells go on pump at completion. Recovery factors low due to connate water in sand which runs as high as 70 percent.

YAZOO COUNTY

TINSLEY

Near town of Tinsley, Townships 9, 10 and 11n, Ranges 2 and 3w. **Discovery Data:** Mapped by Frederic F. Mellen of Mississippi Geological Survey from surface indications in 1939, and worked with reflection seismograph by Union Producing Company. **Discovery Well:** Union Producing Company's C. G. Woodruff 1, completed September 5, 1939. **Structure:** Deep-seated salt dome with complex faulting. **Producing Formations:** Selma sand 4378-4900 ft, Eutaw sand at 5761-86 ft, Upper Tuscaloosa at 6200 ft. Average thickness of pay 200 ft. **Producing Wells:** 303. **Proven Area:** 19,600 acres. **Production:** March, 1945, 801,397 bbls. Cumulative 79,290,839 bbls. **Estimated Reserve:** 30,000,000 bbls. **Rigs Running:** 1. **Deepest Test:** Union Producing Company's Jennie Stevens 21, still drilling in May, 1945, at 9944 ft in Lower Cretaceous. **Gravity:** 29-34. **Outlet for Oil:** 151-car loading rack in field. **Principal Leaseholders:** Union Producing Company, Hassie Hunt, J. P. Evans, C. H. Lyons, Magnolia, Sohio, C. F. Urschel. **Remarks:** The field showed rapid development with peak production of 2,799,437 bbls in March, 1942. Was produced at maximum rates and is now showing rapid decline in productivity. Most wells have been pumping since initial completion at capacity rates.



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Nation's drilling on schedule but wildcats short of 5000 goal. 1944 Mark exceeded.

4700 Exploratory Tests Seen as Total for 1945

Data compiled by District Editors and coordinated
By L. J. LOGAN, Associate Editor

ALTHOUGH total United States drilling is proceeding on the schedule which calls for 27,000 well completions this year, exploration continues to fall short of its programmed objective of 5000 exploratory completions. There will be only about 4700 completions of exploratory tests in 1945 unless there is an improvement henceforth over the 9.3 percent increase above last year recorded for the first 5 months. Even 4700 wildcat completions would set a record in exploration, although a still greater number is needed because of the heavy wartime drain on United States reserves.

In the first 5 months of this year, 1731 exploratory wells were completed, against 1583 in the corresponding months last year. The average for this year has been 78.7 completions per week, compared with 72.0 weekly last year from January through May.

As compared with this 9.3 percent increase in exploratory completions this year, there has been an expansion of about 13 percent in all completions. (THE OIL WEEKLY, June 18, 1945, page 72.)

Successes Gain

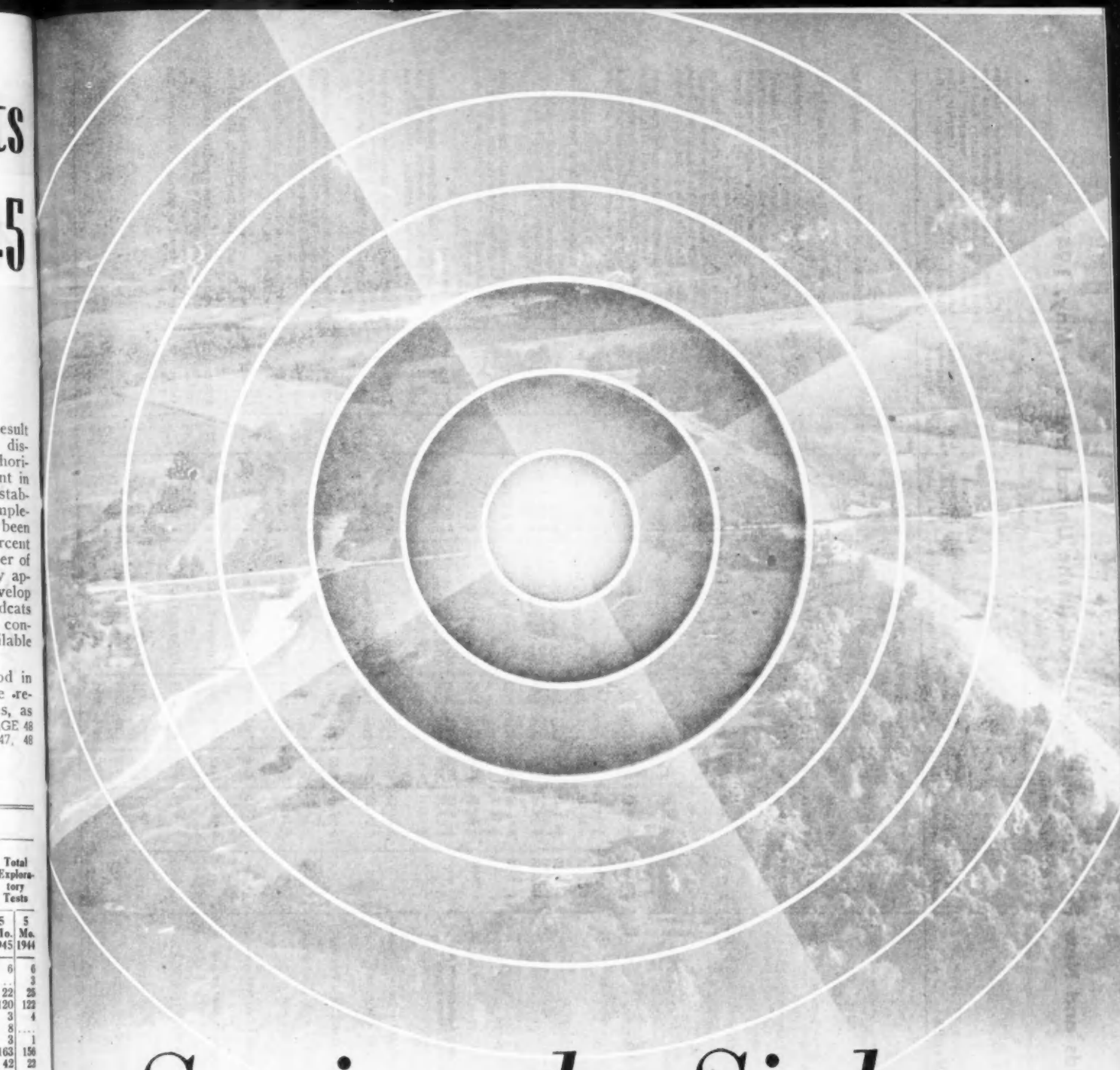
Although the volume of wildcatting is not up in the same ratio as total drilling, the number of successful completions does show an increase over last year in line with total drilling. In the January-May period this year there were 332 productive completions, an increase of 13.7 percent over the 292 successful tests of the corresponding months last year. This 13.7 percent gain is the net result of an increase of 11.4 percent in discoveries of new fields and new pay horizons and an increase of 21.9 percent in reported important extensions to established fields. Of all exploratory completions this year 19.3 percent have been productive against only 18.1 percent successful among the smaller number of completions last year. The industry apparently is trying very hard to develop new reserves, not only drilling wildcats in unprecedented number but also concentrating effort on the best available prospects.

Results have been relatively good in developing new gas and distillate reserves as well as new oil reserves, as

■ CONTINUED ON PAGE 48
■ ALSO SEE TABLES ON PAGES 46, 47, 48

Results of Exploratory Drilling in May and First 5 Months, 1945-1944, by Districts

State or District	MAY, 1945														FIRST FIVE MONTHS 1945													
	Productive Tests										Unproductive Tests			Total Exploratory Tests	Productive Tests								Unproductive Tests				Total Exploratory Tests	
	New Fields			New Pays			Extensions			Total Productive					New Fields			New Pays			Extensions			Total Productive		Wildcats	New Pays	Outposts	Total Dry		
	Oil	Gas	Dis.	Oil	Gas	Dis.	Oil	Gas	Dis.		Wildcats	New Pays	Outposts		Oil	Gas	Dis.	Oil	Gas	Dis.	Oil	Gas	Dis.	5 Mo. 1945	5 Mo. 1944				5 Mo. 1945	5 Mo. 1944	5 Mo. 1945	5 Mo. 1944
Alabama		1								1	1			2		1								1	1	5			5	5	6	6
Arizona																														3		3
Arkansas											9			9											6	20	1	1	22	19	22	25
California							1			1	32		1	34	2			1			2			5	20	114		1	115	102	120	122
Colorado																					1			1	2	2			2	2	3	4
Florida											4			4												8			8		8	
Georgia																										3			3	1	3	1
Illinois	2			3			6			11	30			41	8			13			19			40	29	123			123	127	163	156
Indiana											5			5	1						1			2	5	40			40	17	42	22
Iowa																										1			1	2	1	2
Kansas	4	1		1			2	1		9	31			40	21	5		2			9	4		41	30	129			129	174	170	204
Kentucky	3						1			4	4			8	4						2			6	8	36			36	49	42	57
Louisiana	2									2	11			13	10	2		10		4	3			29	14	58		1	59	59	88	73
North											6			6	1	2					2			5	3	36			36	33	41	36
South	2									2	5			7	9			10		4	1			24	11	22		1	23	26	47	37
Michigan	2									2	21			23	6	2		1	1		1			11	5	90	1	2	93	84	104	89
Mississippi											6			6		1	2				1			4	1	52			52	23	56	24
Missouri																						1		1		10			10	1	11	1
Montana	2						1			3	1			4	2						2			4	2	4			4	5	8	7
Nebraska																										2			2	2	2	2
New Mexico				1						1	8			9	2	1		1	1		1			6	2	27			27	23	33	25
Ohio		2								2	7			9		8			1		1	3		13	17	28			28	23	41	40
Oklahoma	3	1		1			3			8	37			45	22	4	1	4	2		10	1		44	19	123			123	80	167	99
Tennessee																										1			1	2	1	2
Texas	7	1	2	1		2	4		1	18	108	2	1	129	53	13	12	24	1	2	11		3	119	124	475	20	11	506	482	625	606
E. Tex. Border																										2	7		7	3	7	5
Rest of E. Tex.						1				1	7			8	2	1				1				4	6	27	2	2	31	58	35	64
North Texas	2									2	31			33	8			6	1		1			16	26	118	4	1	123	109	139	135
West Central	2	1								3	10			13	6	3		2						11	9	47	3		50	41	61	50
West Texas				1			2			3	20			23	11			6			6			23	19	92	7	5	104	69	127	88
Panhandle																										4			4	5	4	5
Upper Coast	1		2			1	2		1	7	11	2	1	21	6	3	6	9		1	4		2	31	17	45	4	3	52	50	83	67
Lower Coast	2									2	14			16	13	5	5						1	24	29	76			76	63	100	92
Southwest											9			9	5	1	1	1						8	15	45			45	63	53	78
South Central											6			6	2									2	1	14			14	21	16	22
West Virginia																														1		1
Wyoming							1			1				1	3						2			5	7	7		3	10	5	15	12
Total U. S.	25	6	2	7		2	19	1	1	63	315	2	2	382	134	37	15	56	6	6	66	9	3	332	292	1,358	22	19	1,399	1,291	1,731	1,583



Setting the Sights

for more successful drilling programs

While exploratory tests for the first four months of this year are only 6.4% greater than for the same period last year, productive completions have risen by 17.5% . . . an increase almost three times greater than the increase of tests. This higher percentage of successful completions is due largely to an increased discovery of new fields, rather than extensions or new pays . . . a tribute to the greater accuracy of the reflection seismograph in the approval or condemnation of acreage for oil prospecting.

Constant improvements in equipment, refinements in techniques, advancements in skill and experience, will continue to sharpen the accuracy with which General "Sets the Sights" to keep new discoveries on the upward trend.

General GEOPHYSICAL COMPANY HOUSTON

New Oil and Gas Fields and New Pay Horizons Discovered in the United States in May, 1945

Also Important Extensions to Established Fields

COUNTY	FIELD	COMPANY, WELL AND LOCATION	Date Spudded	Date Completed	Total Depth (Feet)	Completion Horizon (Feet)	[1]Name, Character and Age of Producing Formation	[2]Initial Production Method and Choke	Gravity of Oil	[3]Structure: [4]Method of Discovery	Tentative Evaluation of Discovery or Extension (Opinion of Relative Importance of Area from General Viewpoint of the Industry Based on Pertinent but Necessarily Incomplete Data. Later Development or More Complete Data Obviously Might Require Revision of this Tentative Opinion).
		ALABAMA—New Gas Field									
Winston		Glen Rose's Boshell 1, c nw ne, 18-12s-8w		5- 7-45	2004	1760- 1765 1860- 1870	Bongar li Tuscumbia li	F 0.786 mln			
		CALIFORNIA—Oil Field Extension									
Kern	Edison	Richfield Oil Corp.'s Cauley 2, 43-16; 16-30s-29e		5-15-45	4625		Nozu sd; M. Mio	P 183, 3.8% wtr.	19.5		Extends Nozu sd prod of W. Edison abt ¼ mi ne.
		ILLINOIS—New Oil Fields									
Jasper	N. Willow Hill	Robinson-Puckett's Roberts 1, ne ne se 26-7n-10e	4- 7-45	5-15-45	2660	2599- 2660	McClosky li; Miss	P 180			1¼ mi nw Willow Hill pool; limited on s by dry hole ¼ mi distant.
Jefferson	S. Dix	L. & W. Drilling Co.'s Sargent 1, sw sw nw 22-1s-2e		5-27-41	1938	1931- 1938	Bethel sd; Miss	P 63			1¼ mi s of Dix pool and previously included in that pool. Not a current discovery.
Marion	Odin	Buell-Doran's M. J. Young 1, se ne se 12-2n-1e	5- 2-45	5-29-45	1760	1746- 1760	Cypress sd; Miss	P 125			Lies in center of triangle formed by Sandoval, Tonti and Salem pools. Located on eastward extension of Sandoval anticline as mapped by Illinois Geological Survey. 1¾ mi fr nearest prod which is in Salem pool.
		ILLINOIS—New Oil Pays									
Clay	Passport	Magnolia's Buerster 1, sw se nw 12-4n-8e	3-23-45	5- 8-45	3138	2998- 3005	McClosky li; Miss	P 3, 21 wtr.			This is same pay as that reported as Rosiclare li in disc well for pool and is "new" pay only in the sense that it has been given different name. Available data do not indicate which name is correct.
Jefferson	Woodlawn	Texas Co.'s E. Eubanks Comm. 1, sw nw se 35-2s-1e		5-15-45	3746	3660-	Devonian li; Dev.	P 65			Former Mississippian prod located near center of pool. Originally comp in 1941 in U. Mississippian 1955-1982 and later deepened.
Wabash	E. Keensburg	Myers-Miller's Laura Reall "A" 2, ne ne sw 11-2s-13w	4-21-45	5-29-45	2776	2716- 2776	Lower O'Hara li; Miss.				Pool originally prod fr McClosky li but had been abnd. This well revives pool and adds new pay.
		ILLINOIS—Oil Field Extensions									
Clay	Sailor Springs Consol.	Doran's Brissenden 1, se se sw, 16-3n-7e	4-17-45	5-15-45	2335	2315- 2335	Tar Springs sd; Miss.	P 31, 18 wtr			1¼ mi sw extension; separated fr pool by several dry holes.
Effingham	Bible Grove	Ashland's Wiebking 1, se se ne 20-6n-7e	4-19-45	5- 8-45	2860	2856- 2860	McClosky li; Miss.	F 480			1 mi nw extension.
Hamilton	Rural Hill	Dirickson's Presley 1, se se sw 5-6s-6e	4-10-45	5-22-45	3117	3088- 3115	Aux Vases sd; Miss.	P 176, 4 wtr			1¼ mi ne extension.
Wayne	Clay City Consol.	Robinson-Puckett's Molt 1, ne nw nw 33-1n-8e	4-13-45	5-29-45	3226	3023- 3226	Aux Vases sd; Miss.	P 123			1½ mi w extension.
Wayne	Johnsonville Consol.	Fulk's Powless 1, se se se 5-1s-6e	4- 9-45	5-15-45	3289	3240- 3289	McClosky li; Miss.	P & F 460			½ mi extension to Johnsonville and Sims North pools. Consolidates the two into Johnsonville Consolidated.
White	Herald	Yoder's Holland ne sw sw 34-6s-9e	4-26-45	5-29-45	2726	2712- 2726	Cypress sd; Miss.	P 77			¾ mi w extension.
		KANSAS—New Oil Fields									
Dickinson	N. Lost Spgs.	National Drilling Co.'s Doyle 1, ne se 22-16s-4e, 1 mi n Lost Springs pool		5- 8-45	2308	2275- 2308	Miss. chat; Miss.	P 80, 20 wtr		Str, trp; dr	Undetermined.
Russell	N. Atherton	Derby Oil Co.'s Rogg 1, se se sw 7-13s-14w, ½ mi n of Atherton pool		5-22-45	3200	3195- 3200	Arbuckle li; Cam.	Sw 850	39	Str, trp; geol, dr	Although only ½ mi n Atherton pool well is considered on separate structure, since dry hole dr between it and Atherton. Arbuckle li has good porosity.
Salina	Unnamed	Westgate-Greenland Oil Co.'s Prescott 1, nw se sw 17-14s-2w, 2 mi n Salina pool		5-19-45	3253	3238- 3253	Viola li; Ord.	P 245		Ant; seis	Undetermined; reported saturation of Viola not heavy.
Sedgwick	Unnamed	Fulton-Turner's Hohn 1, nw nw sw 22-27s-1w, 1½ mi w Wichita		5-29-45	2832	2828- 2832	Lansing li; Perm.	F 100		Ant; sub	Fairly good strike; first oil disc in western vicinity of Wichita.
		KANSAS—New Gas Field									
Barton	Unnamed	Champlin Ref. Co.'s Christianson 1, ne sw ne 29-20s-14w, 2 mi w Prichard pool		5-25-45	3650	3601- 3611	Arbuckle li; Cam.	F 8 mln		Ant; seis	Well had slight oil show with gas and some water; checks approx 20 ft higher on Arbuckle with dry hole drilled in sw corner same section.
		KANSAS—New Oil Pay									
Russell	Forest Hill	Harry Gore's Luerman 1, sw se 28-15s-12w, in Forest Hill pool		5-14-45	2833	2825- 2833	Topeka li; Penn	Phy Pot 695		Ant; dr	Fairly important; li has hood saturation; likely prod 5000 bbls to ac.
		KANSAS—Oil Field Extensions									
Ellis	Bemis	Nadel-Gussman's Meis 1, nw sw sw 6-12s-17w, 3 mi sw Bemis pool		5-17-45	3688	3683- 3688	Arbuckle li; Cam.	Phy Pot 2627	32	Lge ant; geol	Important extension; subsurface trend on Central Kansas Uplift; may link up with Walters pool to nw.
Ellis	Walters	Nadel-Gussman's Jensen 1, sw ne sw 12-12s-18w, ½ mi ne Walters pool		5-18-45	3663	3658- 3663	Arbuckle li; Cam.	P 480	32	Ant; geol	Proves abt 320 ac; on Bemis pool trend and future dr may link up with that pool.
		KANSAS—Gas Field Extension									
Stanton	Hugoton	Stanolind's Fegan 1, C 3-27s-39w, 12 mi w Hugoton gas pool		5- 7-45	2605	2428- 2450	Krider sd; Perm.	F 10 mln		Ant; sub, dr	Important 12 mi w extension of Huguton gas pool.
		KENTUCKY—New Oil Fields									
Henderson	Dixie	J. L. Sallee's Lyles 1, 21-0-22		5-21-45	2301	2289- 2301	Cypress sd; U. Miss.	P 375			
Henderson	Unnamed	Fleming-Swan's Pottinger 1, 1-0-22		5-18-45	2672	2665- 2672	Cypress sd; U. Miss.	P 125, 40 wtr			
Union	Waverly	Ashland Oil & Ref. Co.'s Verona Coal Co. 1, 7-0-21		5-30-45	2287	2280- 2285	Cypress sd; U. Miss.	P 130, 8 wtr			
		KENTUCKY—Oil Field Extension									
Henderson	Rock Springs	National Associated Pet. Co.'s Denton 1, 4-0-23		5-13-45	2252	2250- 2252	Cypress sd; U. Miss.	P 90			
		SOUTH LOUISIANA—New Oil Fields									

		KENTUCKY—Oil Field Extension									
Henderson	Rock Springs	National Associated Pet. Co.'s Denton 1, 4-0-23		5-13-45	2252	2250- 2252	Cypress sd; U. Miss.	P 90			
		SOUTH LOUISIANA—New Oil Fields									
Acadia	S. Bayou Mallett	Union Sulphur Co.'s Mervine Kahn 1, 670.8 s 695.4 w of c of 25-7s-1e	2-15-45	4-11-45	10320	9610- 9615	Chickasahway sd; Olig.	F 122, 10% wtr; 64/64"	37.6	Flt struct; refl seis	On new structure s of old Bayou Mallett prod.
Iberia	Weeks Island	Shell's Smith-State Lse 500-1, n 89° 51 mins w 1925 alg nl sec 13 fr nec th s 00° 09 mins. w in 13-14s-6e.	9-21-44	5- 9-45	14025	13505- 13520	Miocene sd; Mio.	F 112; 32/64"	40		Deepest producer in the world.
		MICHIGAN—New Oil Fields									
Kent	Rockford	S. L. McCall's Hutchins 1, ne ne sw 25-9n-11w, Algoma twp, 15 mi ne Walker fld.	3-26-45	5-28-45	2213	2204- 2208	Traverse li; Dev.	F 41, 2 wtr	42	Ant; geol	
Tuscola	Gagetown	Shell's Hutchinson 1, ne ne nw 21-14n-10e, Elmwood twp, 15 mi e Akron fld.	2- 6-45	5- 9-45	3945	2740- 2760	Dundee li; Dev.	P 11, 9 wtr	28.4	Ant; seis	Disc itself second rate but geol advance work suggests fair prospect.
		MONTANA—New Oil Fields									
Pondera		Texas Co.'s McCann 1, se nw se 21-27n-2w		5- -45	1502	1468- 1486	Yellow sd	P 11, 3½ wtr			
Toole		Consolidated Gas Co.'s Gillespie 1, se nw se 15-35n-4n, 2 mi w nearest prod.		5- -45	2341	2333- 2341	Ellis-Madison li	P 100, 1000 wtr			
		MONTANA—Oil Field Extension									
Toole	Devon	Texas Co.'s Weir 1, nw se ne 4-33n-1e		5- -45	1647	1645- 1646	Ellis-Madison	P 20, 9.8 wtr			Extends Devonon oil pool ¼ mi west.
		NEW MEXICO—New Oil Pay									
Lea	Drinkard	Gulf's State—T.R. Andrews 1, e nw ne 32-22s-38e, 1⅝ mi se Drinkard fld's Yeso disc at 6375-6460 ft.	11-20-45	5-22-45	7400	6925- 7000	Wichita-Albany li; Perm.	F 616; 44/64"	38.3	Ant; geol	First Wichita-Albany (Basal Yeso) strike for state. Dry in Drinkard fld's Yeso zone; showed unusually lge vol gas with oil via drill-stem tests above comp perf. This pay not present in Drinkard disc area.
		OHIO—New Gas Fields									
Muskingum		B. G. Bartley's John Burrier 1, sec 8 Hopewell twp		5-10-45	3256	3241- 3256	Clinton sd; Sil.	F 1.3 mln			2 mi se of Cottage Hill oil fld.
Perry		Ohio Fuel Co.'s Sunday Creek Coal Co. 259, sec 1, Monroe twp		4-22-45	4021	3983- 4018	Clinton sd; Sil.	F 0.757 mln			Well will be tested in li before any offsets are drilled.
		OKLAHOMA—New Oil Fields									
Okmulgee	Unnamed	Monarch Royalty Corp.'s West 1, se sw ne 6-13n-11e, 6 mi w Okmulgee		5- 1-45	3280	3250- 3280	Wilcox sd; Ord.	F 100	36	Possible flt Ant; dr	May cover 160 ac; sd thick and highly saturated indicating long life.
Pottawatomie	E. Wanette	Kerlyn Oil Co.'s Bourassa 1, nw ne se 21-6n-3e, 1 mi e Wanette pool		5-14-45	4397	2919- 2922	Layton sd; Penn	P 182, 910 wtr	39.5	Ant; seis	Possible link with Wanette pool to w.
Pawnee	Unnamed	Westgate-Greenland Oil Co.'s Ortin 1, nw nw se, 33-22n-5e, 1½ mi w Pawnee.		5-20-45	3150	3108- 3150	Bartlesville sd; Penn.	P 25	36.9	Ant; seis	Undetermined; apparently small.
		OKLAHOMA—New Gas Field									
Okmulgee	Unnamed	Williams-Copeland Drilling Co.'s Irby 1, ne sw nw 20-16n-12e, abt 1 mi sw Mounds.		5- 2-45	2175	2137- 2175	Dutcher sd; Penn.	F 4.5 mln		Ant; seis, dr	Sml gas pool in area where similar sml structures prod gas have been found.
		OKLAHOMA—New Oil Pay									
Garvin	E. Pauls Val.	Ohio Oil Co.'s Mullinix 1, ne nw ne 11-3n-1e		5-23-45	3045	3030- 3045	McLish sd; Ord.	Pot F 2400; ¼"		Ant; dr	Important strike; located on w side E. Pauls Valley pool where Pennsylvanian formations thin out and McLish sd comes in high. 4th prod zone for pool.
		OKLAHOMA—Oil Field Extensions									
Carter	Crescent	Continental's Dotson 1, sw ne nw 7-2s-3w, ½ mi sw Crescent pool		5-21-45	6478	6300- 6478	Pennsylvanian sd; Penn.	P 100		Ant; dr	Extends Crescent fld ½ mi s; sd saturation medium.
Lincoln	W. Davenport	L. B. Jackson's Mears 1, ne nw nw 8-14n-5e, ½ mi s W. Davenport pool		5-28-45	3526	3500- 3526	Prue sd; Penn.	P 100	41	Ant; dr	Undetermined.
Oklahoma	W. Edmond	Magnolia's Whetsone 1, cnw se 33-13n-4w, ¾ mi s W. Edmond pool		5- 7-45	7035	6990- 7035	Hunton li; Dev.	Pot F 4480, 6 mln; ¼"		Str trp; dr	Extends W. Edmond pool ¾ mi s; one of best completions in pool.
		UPPER TEXAS GULF COAST—New Oil Field									
Wharton	S. Hillje	Sam G. Harrison's T. N. Mauritz 1, 467 fr n&wl M&C sur sec 11, 440-ac lse, 1 mi se Hillje.	2- 1-45	3-23-45	7510	5225- 5232	Marginulina sd; Olig.	F 20; 16/64"	41.8		Although well made gas, 2nd test in fld logged sd lower and comp as oil prod.
		UPPER TEXAS GULF COAST—New Distillate Fields									
Colorado	Inglehart	Shell's Kyle Est. 1, 642 fr nwl 660 fr swl 76.91-ac lse, 1200 fr sel 1500 fr nel J. Grant sur.	1- 7-45	5-10-45	11944	8780- 8800	Wilcox sd; Eoc.	F 62, 8 wtr, 3.5 mln; ¼"	50.3		Shut in gas well. Similar to other gas-distillate strikes in county.
Colorado	Rock Island	Sinclair Prairie's Felix Fehrenkamp 1, 5050 fr nl 1050 fr el sec 23 SA&MG sur, 610-ac lse.	12-15-44	5- 1-45	11000	9680- 9695	Wilcox sd; Eoc.	F 27.4, 0.765 mln; ⅛"	50		Shut in gas-distillate well.
		UPPER TEXAS GULF COAST—New Distillate Pay									
Montgomery	Pinehurst	Pan American's L. E. Posey 1, 467 fr nel 541.5 fr swl 330 fr sel 40-ac unit in nwc 154.87-ac lse, J. B. Richards sur, 4030 e&n of La Gloria's Grogan-Cochran 1, gas-cond well.	8-22-44	5- 5-45	11820	11050- 11095 9564- 9622	Wilcox sd; Eoc.	F 288; ¼" F 75; ¼"	53.2 60.2		Important strike. Both sds in well are new, giving fld 4 sds in Wilcox in only 2 wells.
		UPPER TEXAS GULF COAST—Oil Field Extensions									
Brazoria	Blue Lake	Glenn McCarthy's Willella W. Smith 31, 330 fr n&el 64.34-ac lse, John Bradley sur, nwly fr Wilson E-1.	3- 1-45	5-10-45	10220	8650- 8665	Frio sd; Olig.	F 651; ¼"	36.1	Seis	Important extension. 1st well in fld was pumper. Rapid development indicated.
Wharton	S. Hillje	Sam G. Harrison's G. P. Willis, Wallace, Hancock 1, 466 fr s&wl se¼ sw¼ L. L. Miller sur sec 14, 1700 ne of Harrison's Mauritz 1, in nwc sec 11.	4- 1-45	4-28-45	6534	5239- 5247	Marginulina sd; Olig.	F 103; 24/64"	28.5		First oil prod in fld.
		UPPER TEXAS GULF COAST—Distillate Field Extension									
Colorado	Frelsberg	Sinclair Prairie's Tulane Gordon 1, 660 fr n&wl Peter Piper sur, 100-ac tr, 4375 s sw of Thompson 1, disc well.	10- 6-44	4-25-45	11727	8475- 8495 8860- 8930	Wilcox sd; Eoc.	F 41.4, 1.91 mln; 8/128" F 119.3, 1.87 mln; 16/128"	73 59.3		2nd well on lge structure. Unusual high gravity dist prod in upper sd.
		LOWER TEXAS GULF COAST—New Oil Fields									
Jackson	Moody Ranch	Crown Central Pet. Corp.'s W. L. Moody Jr. 1, 6622 sw at ra, 4228-ac lse, Nancy McFarland sur.	1-11-45	5- 8-45	9284	8822- 8840	Basal Frio sd; Olig.	F 77.68; 32/64"	46.3		Comp through stuck drill pipe. 2nd test started.
San Patricio		Bridwell Oil Co.'s Bertha C. Willman 1, 330 fr sel 330 fr swl 148.6-ac lse, Delgado Gr, 1 mi sw Mathis.	4-14-45	5- 7-45	4563	4553- 4563	Frio sd; Olig.	F 132; 8/128"	22.5		Single well reserve estimated at 240,000 bbls.
[illegible]	Coke	**EAST TEXAS—New Distillate Pay** Amerada Pet. Corp.'s E. L. Faulk 3, 467 ft out of nwc of 96.56-ac lse, or 1770 ft ewl and 467 ft snl of Jas. Knight sur, nw twin to Paluxy well at 6230-6340.	3-19-45	5-19-45	8375	8080- 8130	Young (Basal Rodessa) li; L. Cret.	F 57, 32 mln; open flow	70	Ant; geol	Dist yld above av for district. Gas affords ample cheap fuel for treating cut-oil fr Paluxy and for pumpers; possibly for repressuring of Paluxy, which is drilled up with 28 producers.
		NORTH TEXAS—New Oil Fields									
Archer		L. T. Burns' Benson 1-E, 330 ft snl and 467 ft ewl of sec 1808, TE&L Co. sur, 3¾ mi nw Mississippi prod, nearest deep well.	2- 4-45	5-26-45	5428	4594- 4600	Bend li; Penn.	P 70, 3 wtr	42.3	Ant; geol	Pay thickness subnormal. Not important.

New Oil and Gas Fields and New Pay Horizons Discovered in the United States in May, 1945

Also Important Extensions to Established Fields

COUNTY	FIELD	COMPANY, WELL AND LOCATION	Date Spudded	Date Completed	Total Depth (Feet)	Completion Horizon (Feet)	[1]Name, Character and Age of Producing Formation	[2]Initial Production Method and Choke	Gravity of Oil	[3]Structure; [4]Method of Discovery	Tentative Evaluation of Discovery or Extension (Opinion of Relative Importance of Area from General Viewpoint of the Industry Based on Pertinent but Necessarily Incomplete Data. Later Development or More Complete Data Obviously Might Require Revision of this Tentative Opinion).
Clay		Continental's A. E. Thomas 1, 330 ft snl and 990 ft ewl of sec 34, Freestone County School Lands, 6½ mi ne Buffalo Springs 1-well pool in Simpson 6490-6513.	2- 6-45	5-16-45	7108	4130- 4150	Strawn sd; Penn.	P 33	39	Ant; geol	May develop into small but attractive pool.
		WEST CENTRAL TEXAS—New Oil Fields									
Shackelford		A. M. Hagan-W. W. Harvey-H. H. Henderson's J. H. Nail 1, 1940 ft wel and 2640 ft nal of sec 126, E. T. Ry. sur, 13¼ mi s by e of nearest prod.	3- 2-45	5- 4-45	1380	1315- 1324	Cook sd; Penn.	P 62	34	Ant; geol	Situated amidst dry holes, indicating sml pool.
Shackelford		Harry P. Key's W. H. Green 1, c nw se T&P Ry 47, blk 11, mi plus w of shallow prod.	10- 9-44	5- 6-45	4451	3010- 3017	Strawn li; Penn.	P 99, 8% wtr	42	Ant; geol	Not capable maintaining initial output; wtr with oil discounts importance of pay.
		WEST CENTRAL TEXAS—New Gas Field									
Concho	Eden	Northern Ordnance, Inc.'s Mrs. Leta Sorrell 1, 2310 ft snl and 2316 ft ewl of sec 206, Elias Kemper sur, A-1743.	2-22-45	5-11-45	3322	3294- 3302	Marble Falls li; Penn.	F 51, 20.5 mln	.....	Ant; geol	2nd and larger gasser since comp 4200 ft to sw; probably expansive gas area, altho comparatively thin pay.
		WEST TEXAS—New Oil Pay									
Ector	TXL-Ellenburger	Shell's E. R. Thomas 1-A, near c nw nw T&P Ry 8, blk 45, T-1-S, ⅝ mi nw Devonian prod at 7895-8042 ft and failure in latter.	11- 6-44	5-15-45	9852	9705- 9852	Ellenburger dolo; Ord.	F 1547; ½"	44	Ant; geol	Failed in rge Devonian oil zone, which may be restricted to sw flank Ellenburger high that trends nw to se. This Ellenburger strike establishes major sweet-crude reserve, as apex of structure at this time is 2¼ mi se where confirmation well is 43 ft. higher with more 200 ft of effective Ellenburger pay. More than 100 wells to be drilled, costing $150,000 to $200,000 each.
		WEST TEXAS—Oil Field Extensions									
Andrews	Mascho-Fuhrman	DeKalb Agricultural Asso.'s Lockhart-Brown 1-A, c se nw PSL 15, blk A-42, 1¾ mi nw of prod.	2-15-45	5-31-45	4595	4364- 4540	Grayburg and San Andres li; Perm.	P 131, 5% wtr	31.5	Ant; geol	Routine extension.
Gaines	Russell	Shell's Wm. Pierson 1, c ne sw sec 452, blk G, CCSD&RGNG sur, 1¼ mi e of prod.	1-12-45	5-29-45	7727	7285- 7727	Clear Fork li; Perm.	P 105	33	Ant; geol	Estimated only 30 ft net of effective saturation in thick broken pay section.
		WYOMING—Oil Field Extension									
Park	Half Moon	Husky Refining Co.'s Morrison 2, nw ne sw 25-51n-102w	.....	4- -45	3563	3317- 3400	Embar li; Perm.	F 150	.....	.....	¼ mi se extension of Half Moon pool.

[1] Character of producing formations abbreviated thus: ch, chalk; dolo, dolomite; li, limestone; sd, sandstone; sh, shale, ser, serpentine; cgl, congolmerate. Ages of formations abbreviated thus: Pleis, Pleicene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene; Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre, Lower Cretaceous; Jur, Jurassic; Tri, Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Miss, Lower Mississippian; Devo, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian.

[2] Barrels of oil per day (24 hr. rate), flowing (F), pumping (P), swabbing (Sw), or bailing (B); or million cubic feet of gas daily open flow capacity; size of choke given in inches.

[3] Type structure abbreviated as follows: Ant, Anticline; D, Dome; Fld, Fold or Folded; Flt, Fault or Faulted; M, Monocline; N, Nose; SD, Salt Dome; Str trp, Stratigraphic trap; Syn, Syncline; Ter, Terrace.

[4] Method of discovery abbreviated as follows: cd, core drilling; dr, drilling; geol, geology; geop, geophysics; grv, gravity meter; ran dr, random drilling; seis seismograph; sub, subsurface geology; sur, surface geology.

Exploration Falls Short

■ CONTINUED FROM PAGE 44

shown in the accompanying summary table.

In the search for oil, the most noteworthy success has been that in finding entirely new fields. There have been good results also in adding to oil reserves by extending fields, but fewer new oil pay zones have been opened this year than last year. In finding new gas and distillate reserves, too, there have been relatively good results this year in going into entirely new areas. Although new pay zones and extensions of proved fields continue to add to reserves, the semi-wildcatting appears to have diminishing possibilities at present, and the more noteworthy success attends strict wildcatting in unproved areas.

Exploratory wells were completed in May at the rate of 76.4 per week, compared with 80.5 weekly in April. Furthermore, only 16.5 percent of these completions were productive in May, compared with 20.5 percent successful in April.

Among the more interesting exploratory developments of May was the establishment of a new world's record for deep production through completion of the discovery well of the Week's Island field, Iberia Parish, southern Louisiana. Drilled by Shell Oil Company, the well flowed 112 barrels 40 gravity oil per day through a 10/64-inch choke, gas/oil ratio 17,589/1. Production came from Miocene sand through perforations at 13,505-13,520 feet in 7-inch casing cemented at 13,550 feet. This deep well, drilled to 14,025 feet, was completed in about 7½ months after spudding. Previously, the world's deepest producing well was Union Producing Company's and Fohs Oil Company's Buckley-Bourg 2, DeLarge field, Terrebonne Parish, South Louisiana, which yielded 37 gravity oil from 13,503 feet. (The greatest depth ever drilled was that of 16,665 feet recently reached in Phillips Petroleum Company's Fannie Schoepps 3, at Millican dome, Brazos County, upper Texas Gulf Coast, which is testing at about 11,500 feet after twisting off drill pipe in the lower part of the deep hole. The same company also was holder of a previous drilling depth record, having drilled Ada Price 1, Pecos County, West Texas, to 15,279 feet in 1944.)

Other May discoveries and extensions were fairly well scattered over the United States, and the month's record appeared on the whole to be ordinary, embracing few if any especially promising strikes.

California gained no new fields but the Edison field of Kern County was extended about a quarter of a mile northeast. Colorado had no discoveries, but Montana and Wyoming recorded several discoveries and extensions.

Middle West Results

Fairly good prospecting results occurred in the Middle West. Michigan gained 2 new oil pools, while in Kentucky 3 oil fields were found and 1 oil field was extended. Illinois had 2 oil field discoveries, 6 new oil pay discoveries, and 3 oil field extensions. In Kansas 4 oil fields and 1 gas field were discovered, along with a new pay in the Forest Hill pool, Russell County, while there were extensions to 2 oil fields and

the Hugoton gas field. Individually, most of these Kansas developments appeared of limited importance. Oklahoma had a variety of successful exploratory completions, as there were discoveries of 3 oil pools and 1 gas pool, while a promising new pay was opened in the East Pauls Valley pool of Garvin County, the fourth pay for the pool; and in the meantime 3 oil pools were extended, including the Crescent pool of Carter County, ½ mile south, and the West Edmond pool ¾ mile to the south.

Texas and adjoining states contributed about a normal amount of oil and gas reserve discoveries in May. South Louisiana had one oil field discovery besides the previously mentioned record-depth producer as the South Bayou Mallet field was proved in Acadia Parish. New Mexico's Drinkard pool, Lea County, gained a new oil producing horizon, the Wichita-Albany lime of the Permian, as that formation yielded its first production in the state. In West Texas 2 oil fields were extended and another field gained a new oil pay zone. North and West Central Texas together gained 4 new oil pools and a new gas pool, but these discoveries were all of limited significance. A new and deeper pay (gas-distillate) in the Coke field of Wood County was the only addition to reserves in Eastern Texas. The lower Gulf Coast of Texas gained new oil fields in Jackson and San Patricio Counties, and the upper Texas Coast had a fair run of discoveries as 1 oil field and 2 distillate fields were opened, a new distillate pay was found at Pinehurst field of Montgomery County, and extensions were provided for 2 oil fields and a distillate field.

Summary of Results of Exploratory Drilling

ITEM	May, 1945	April, 1945	JANUARY-MAY 1944	JANUARY-MAY 1945	Percent Diff.
Oil Discoveries	32	32	178	190	+ 6.7
New Fields	25	15	116	134	+ 15.5
New Pays	7	17	62	56	— 9.7
Distillate Discoveries	4	4	12	21	+ 75.0
New Fields	2	3	10	15	+ 50.0
New Pays	2	1	2	6	+200.0
Gas Discoveries	6	7	38	43	+ 13.2
New Fields	6	5	32	37	+ 15.6
New Pays	.....	2	6	6	.....
Total Discoveries	42	43	228	254	+ 11.4
Extensions to Fields	21	23	64	78	+ 21.9
Oil Fields	19	18	48	66	+ 37.5
Distillate Fields	1	1	5	3	— 40.0
Gas Fields	1	4	11	9	— 18.2
Total Prod. Tests	63	66	292	332	+ 13.7
Dry Holes	319	256	1,291	1,399	+ 8.4
(Weekly Average)	63.8	64.0	58.7	63.5	+ 8.4
Wildcats	315	244	1,251	1,358	+ 8.6
New Pays	2	9	7	22	+214.3
Outposts	2	3	33	19	— 42.4
Total Exploratory Tests	382	322	1,583	1,731	+ 9.3
(Weekly Average)	76.4	80.5	72.0	78.7	+ 9.3
Percent Productive (Weekly Average)	16.5	20.5	18.1	19.3	.....
Percent Dry (Weekly Average)	83.5	79.5	81.9	80.7	.....

Dry hole completions are from weekly reports and totals represent completion for 5 weeks in May, 1945; 4 weeks in April, 1945; 22 weeks in Jan.-May, 1945, and 22 weeks in Jan.-May, 1944.

Color Code Simplifies Lubrication

Unskilled labor can be effectively guided in applying the right grease or oil to machinery through use of a new American war standard based on a simple system of matching colors. The system has been developed by the American Standards Association, 70 East Forty-Fifth Street, New York 17, New York.

This war standard has been developed through the American Standards Association at the request of the National Machine Tool Builders Association and the War Production Board. The purpose is to facilitate the lubrication service of machinery and also to reduce damage to machinery from misuse of lubricants by unskilled labor. According to the Tool Builders Association, damaged machinery has delayed war production, not only by putting machines out of production, but also because of difficulty in effecting repairs. In a typical case, the erroneous application of a grease to the bearings of a grinding machine requiring high-grade machine tool spindle oil put the machine out of commission for several months.

Plan Is Simple One

The color code aims to make the application of the right lubricant so simple that the least skilled employe can hardly make a mistake. The committee has worked out a basic system of color markings to be applied to the containers of a given lubricant and also to the points where each lubricant should be applied. The lubricating device, such as an oil can or grease gun, and the lubrication fitting to be serviced with it are marked with the same color, either by paint or decalcomania. Thus the service man has only to "match colors."

What kind of lubricant should be used for a particular piece of machinery, of course, is a problem to be decided by the user of the machinery, possibly on the basis of advice from its manufacturer.

Numbers Sometimes Required

The new code covers eight general classes of lubricants, each designated by an identification color. The oils are divided into five classes and the greases into three. For both oils and greases, there is a "general purpose" class and a "special purpose" class. The three remaining classes of oils are: machine tool spindle oils, gear oils, and hydraulic oils. The third class of grease is for anti-friction bearings.

Each class of lubricant has been assigned a standard identification color. Thus, machine tool spindle oils are identified as a class by a yellow-green, Munsell color notation GY 7/10. The lubricant containers such as oil drums do not need to be painted all over with the identification color. A clearly visible patch of color, such as a solid three-inch circle is sufficient.

When an industrial plant uses more than one kind of lubricant in the same class, the code recommends that distinction between these lubricants be made by the use of different numbers marked on the identification color for the class. For example, three types of machine tool spindle oil might be marked by the numbers "1," "2," and "3" on a clearly visible patch of yellow-green. The machine parts to which the oil is to be applied would be marked in the same way. All the maintenance man has to do is to match color and number.

The color code is not intended to indicate any of the physical or chemical properties of a lubricant; but is intended merely to "route" a given lubricant to the points where it is to be applied. Obviously, the same kind of lubricant may come under a different classification in different plants and accordingly be assigned different colors. In general, however, a given kind of lubricant will fall in the same classification, no matter where it is used.

Indiana Standard Tells of Veteran Employment Plan

Standard Oil Company (Indiana) is mailing a letter to its 3500 employes still in military service, not only assuring them jobs on their return, but describing numerous benefits over and above those ordered by veteran's legislation. All who were regular employes will, as a minimum, be restored to the positions in which they last worked on a regular basis or to positions of the same relative standing.

Those who may be unable to resume their previous work because of war disability will be offered other positions which they can be trained to fill. No veteran will be refused employment because of disability if a job can be found which he can perform without creating a safety hazard. Every effort also will be made to place former temporary employes.

Time spent in war service is to be counted as time worked for the company in computing company service.

Pay will start the day the veteran reports, if he goes to work the following day.

Regardless of when the veteran returns, he will become eligible for vacation on the same basis as if he had not been away.

Full resumption of eligibility to benefits of company welfare plans is assured, with special consideration, if necessary.

The majority will receive not only the one month's pay granted on entry into service but also a second month's pay on returning.

While the welcome home will be hearty and sincere, quiet restoration to employment and training on the job will be the plan for making them feel at home.

Special leaves, without pay, will be granted to veterans who wish to avail themselves of opportunities offered by the government for rehabilitation, training, or education.

Albert West Field

The name "Albert West" has been given the field discovered by Continental Oil Company's Albert West 2-A (formerly George West 2) in Live Oak County, Upper Texas Coast, Don O. Chapell, chairman of the oil field nomenclature committee of the South Texas Geological Society, has announced.

Collapse Safety Factors for Tapered Casing Strings

By W. O. CLINEDINST
National Tube Company, Pittsburgh, Pennsylvania

THE use of casing strings composed of more than a single weight and grade, and commonly referred to as tapered strings, presents design problems not encountered in straight strings. Safety factors ranging from 1⅛ to 1½ based on minimum collapse resistance of casing, or 1½ to 2 on average, have been used with apparent success for straight strings by casing designers over a period of years. With the advent of the tapered string, consideration has been given to reduction of collapse resistance under biaxial loading encountered at change-over points. Biaxial loading has been allowed for by various means, such as the strain-energy theories of yielding.[1] Consideration also should be given to the fact that a tapered string has more material subjected to the loading permitted by the design safety factor than a straight string. It seems apparent that the likelihood of failure in a three-section tapered string could be the same as three straight strings having the same safety factors. If this is the case, it would appear that tapered strings should be designed with somewhat higher safety factors than straight strings.

This paper was prepared and approved for presentation before the 1944 annual meeting of the American Petroleum Institute. The annual meeting having been canceled, the paper has been released for publication at this time.

Normal Law Applied

In order to consider this problem, let it be assumed that collapse resistance of casing can be expressed as a normal-law distribution function.

Discussions of the normal law are to be found in treatises on probability or statistical methods.[2] The normal law shown in Figure 1 is expressed:

$$\phi(\chi) = \frac{1}{\sqrt{2\pi}} e^{-\frac{\chi^2}{2}} \qquad (1)$$

Where:

χ = the deviation from the mean expressed as a multiple of standard deviation.

$\phi(\chi)$ = density of distribution at χ.

The probability of failure for a length of casing subjected to a stated pressure is the same as the probability of having a length of casing with a collapse strength equal to or less than the stated pressure. Such probability is readily obtained from tables of error integrals,[3] the error integral $\Phi(\chi)$ being defined as:

$$\Phi(\chi) = 1 - \frac{1}{\sqrt{2\pi}} \int_{-\chi}^{\chi} e^{-\frac{a^2}{2}} da = \sqrt{\frac{2}{\pi}} \int_{\chi}^{\infty} e^{-\frac{a^2}{2}} da \qquad (2)$$

Error integrals indicate the fraction of the universe falling outside the limits $\pm\chi$. The probability of failure in our case is one-half the error integral, or the fraction of the universe falling below the limit $-\chi$.

The deviation χ from the mean of the universe is related to the safety factor as follows:

$$\chi = \frac{(SF)_{Min.} - 1 + 3\sigma}{(SF)_{Min.}\sigma} \qquad (3)$$

Where:

$(SF)_{Min.}$ = collapse safety factor for length of casing based on minimum collapse strength.

σ = standard deviation of universe.

Let us assume that the minimum collapsing pressures listed in *API Code 5-C-2: "Setting Depth Properties of Casing,"* and stated to be 75 percent of the average, are 3 times standard deviation minima. The normal universe then is defined by a standard deviation of $\frac{0.25}{3}$. Collapse tests are generally made on specimens about 10 feet long, so that it will be further assumed that the distribution of collapse strength applies to 10-foot lengths. Substituting the standard deviation of $\frac{0.25}{3}$ in equation (3), the relation-

TABLE 1

5½-In.-Outside-Diameter Casing Combinations

Well Depth (Feet)	Material: Weight Per Foot (Pounds)	Material: Steel Grade	Type of Joint	Amount (Feet)	Safety Factors (Collapse)*
5,000	14.00	H-40	Short coupling	4,150	1.13
	14.00	J-55	Short coupling	850	1.27
5,600	14.00	H-40	Short coupling	4,650	1.13
	14.00	J-55	Short coupling	1,550	1.13
5,700	14.00	H-40	Short coupling	3,950	1.13
	15.50	J-55	Short coupling	1,750	1.35
6,000	14.00	H-40	Short coupling	3,850	1.13
	15.50	J-55	Short coupling	2,150	1.29
6,400	14.00	J-55	Short coupling	5,400	1.13
	15.50	J-55	Short coupling	1,000	1.21
6,850	14.00	J-55	Short coupling	5,350	1.13
	15.50	J-55	Short coupling	1,500	1.13
7,000	14.00	J-55	Short coupling	5,200	1.14
	17.00	J-55	Short coupling	1,800	1.29
7,500	14.00	J-55	Short coupling	5,100	1.13
	17.00	J-55	Short coupling	2,400	1.20
7,950	14.00	J-55	Light upset short coupling	4,900	1.13
	17.00	J-55	Short coupling	3,050	1.13
8,100	14.00	J-55	Light upset short coupling	4,850	1.13
	17.00	J-55	Short coupling	3,050	1.13
	17.00	N-80	Long coupling	200	1.45
8,500	14.00	J-55	Light upset short coupling	4,700	1.13
	17.00	J-55	Short coupling	3,100	1.13
	17.00	N-80	Long coupling	700	1.39
8,600	15.50	J-55	Light upset short coupling	6,250	1.13
	17.00	J-55	Short coupling	1,500	1.13
	17.00	N-80	Long coupling	850	1.37
9,000	15.50	J-55	Light upset short coupling	6,150	1.13
	17.00	J-55	Short coupling	1,500	1.13
	17.00	N-80	Long coupling	1,350	1.31
9,500	15.50	J-55	Light upset short coupling	5,950	1.13
	17.00	J-55	Short coupling	1,500	1.13
	17.00	N-80	Long coupling	2,050	1.24
9,700	17.00	J-55	Light upset short coupling	7,400	1.13
	17.00	N-80	Long coupling	2,300	1.21
10,000	17.00	J-55	Light upset short coupling	7,300	1.13
	17.00	N-80	Long coupling	2,700	1.18
10,400	17.00	J-55	Light upset short coupling	7,150	1.13
	17.00	N-80	Long coupling	3,250	1.13
10,500	17.00	J-55	Light upset short coupling	7,106	1.13
	17.00	N-80	Long coupling	3,300	1.13
	20.00	N-80	Long coupling	100	1.44
10,700	17.00	N-80	Long coupling	10,350	1.13
	20.00	N-80	Long coupling	350	1.42
11,000	17.00	N-80	Long coupling	10,250	1.13
	20.00	N-20	Long coupling	750	1.38
12,000	17.00	N-80	Light upset long coupling	9,850	1.13
	20.00	N-80	Long coupling	2,150	1.26

* Based on minimum collapsing pressure, and effect of axial tension included.

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ship between deviation χ and safety factor becomes:

$$\chi = 12 - \frac{9}{(SF)_{Min.}} \qquad (3a)$$

Collapse Probability Calculated

To determine the collapse-failure probability for any casing string, collapse safety factors for each 10-foot increment of depth are required. These are converted to deviations from mean χ by equation (3a), and the failure probability for each 10-foot length is obtained by taking one-half the error integral shown in equation (2), the values of error integral being obtained from suitable tables.

The sum of the probabilities of failure of the assumed 10-foot lengths is the probability of failure for the complete string. This conclusion is predicated on the assumption that the collapsing pressure of the design will occur; in other words, that the probability of occurrence of the design collapsing pressure is unity. If the probability of collapsing pressure occurrence is other than unity, it is to be determined by consideration of the conditions. The resultant failure probability of the string is then the product of failure probability at the design collapsing pressure and the occurrence probability of the design collapsing pressure.

In actual calculations there are many shortcuts and means of making what seems to be a rather arduous task quite simple. These become apparent.

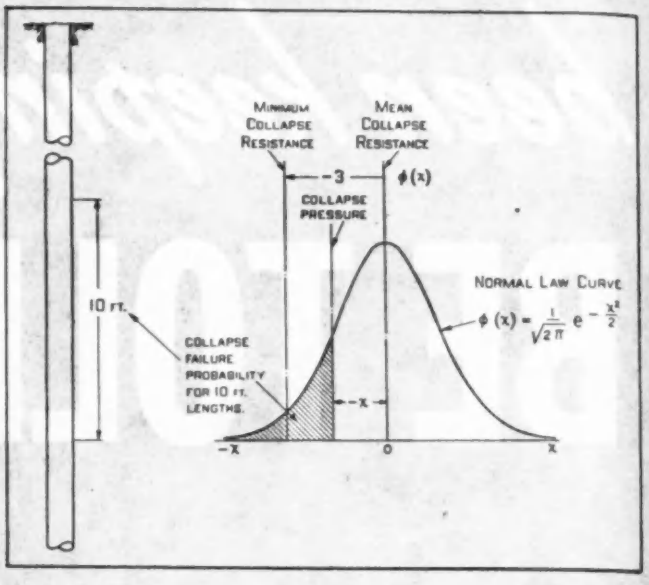

Figure 1. Collapse Resistance Distribution.

The failure probability for straight strings for various levels of safety factors plotted against well depth is shown in Figure 2. The curves include corrections for biaxial loading by the strain-energy theory of yielding.[1] To design straight strings to follow a curve for a specific safety factor, of course, is an impossibility, because the infinite number of weights and grades required is not available.

In Figure 3 the family of curves shown in Figure 2 is repeated, and curves of failure probabilities for 5½-inch OD

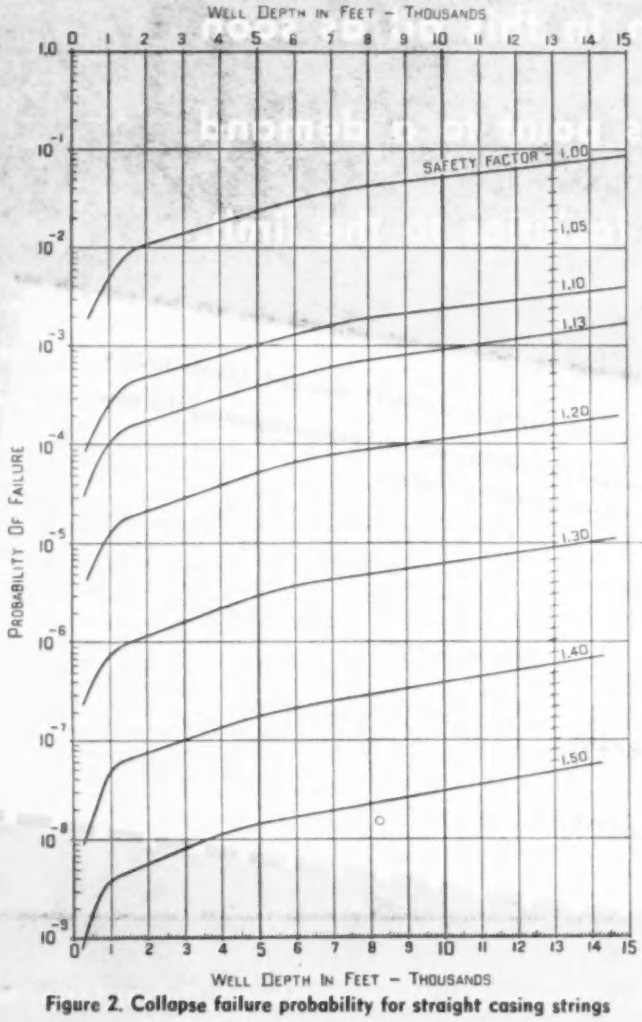

Figure 2. Collapse failure probability for straight casing strings

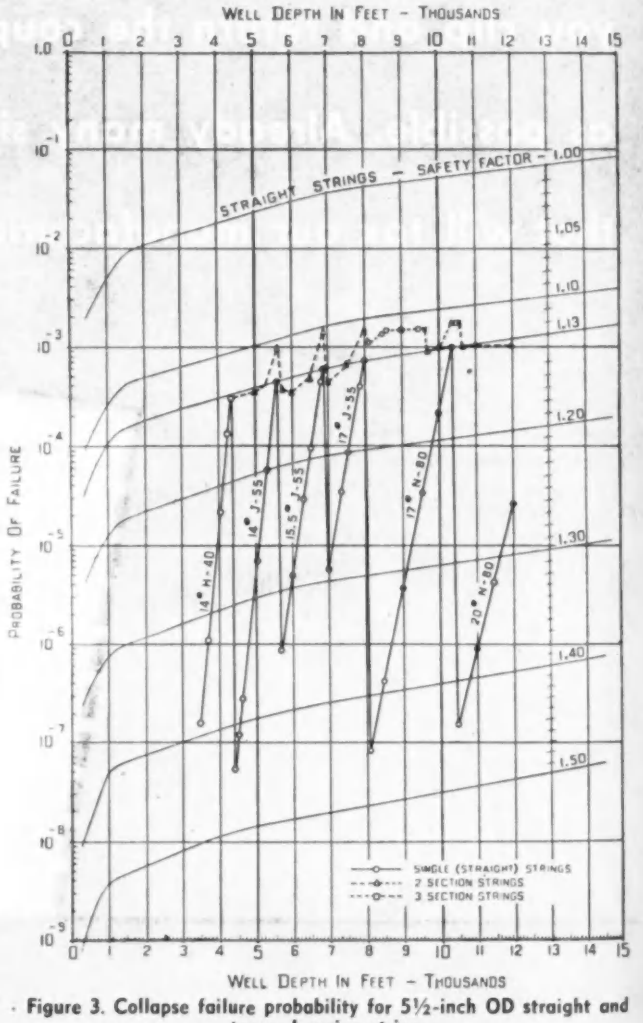

Figure 3. Collapse failure probability for 5½-inch OD straight and tapered casing strings

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straight and tapered strings with limiting safety factor of 1.13 are shown. Details of the tapered strings which were corrected for biaxial loading are shown in Table 1. Both the straight and the tapered strings use the API weights and grades of API 5½-inch-OD casing. It will be noted that the mean of failure probabilities for the tapered is some 50 times that for the straight strings when a limiting safety factor of 1.13 is used for both. Likewise it is readily discerned that a limiting safety factor of approximately 1.25 would be required for tapered strings to approach the mean failure-probability level for straight strings with a limiting safety factor of 1.13.

Although the failure probabilities for the 5½-inch-OD tapered strings in Figure 3 were calculated directly, satisfactory estimates can be determined from the curves in Figure 2. The estimate is made simply by summing the probability of failure of the straight strings, each equal in depth, to the depth to which each section of the tapered string is set, using the correct safety factor for each.

It is of interest to observe that the joint tensile-failure probability for any casing string is just as readily obtained as the collapse-failure probability. In this case, the total failure expectancy for the string is the sum of the failure probabilities of the individual joints. Equation (3) is used with the proper value of standard deviation substituted to determine the values for χ for entering the tables of probability integrals.

Conclusion

In conclusion, it might be said that, for equivalent failure expectancies, tapered strings should be designed with limiting safety factors approximately 10 percent higher than for straight strings. This does not materially reduce the apparent economies of tapered strings in their important applications.

REFERENCES

[1] Blaine B. Wescott, C. A. Dunlop, and E. N. Kemler, "Setting Depths for Casing," *Drilling and Production Practice*, 125 (1940).

[2] Thornton C. Fry, *Probability and Its Engineering Uses*, D. Van Nostrand Co., New York (1928).

[3] "Tables of Probability Functions," Vol. II, Federal Works Agency, Work Projects Administration for the City of New York (1942).

Gas for Carbon Black

Charles Eneu Johnson and Company has been authorized by the Oklahoma Corporation Commission to purchase residue gas from Warren Petroleum Corporation's gasoline plant near Madill, Oklahoma, and to utilize same for the manufacture of carbon black at its plant near Stonewall, Oklahoma. The price was fixed at five cents per thousand cubic feet. The company is manufacturing black through the channel process and disposing its entire output to the government to meet wartime demands.

Water Profile Measuring Instrument Being Tested

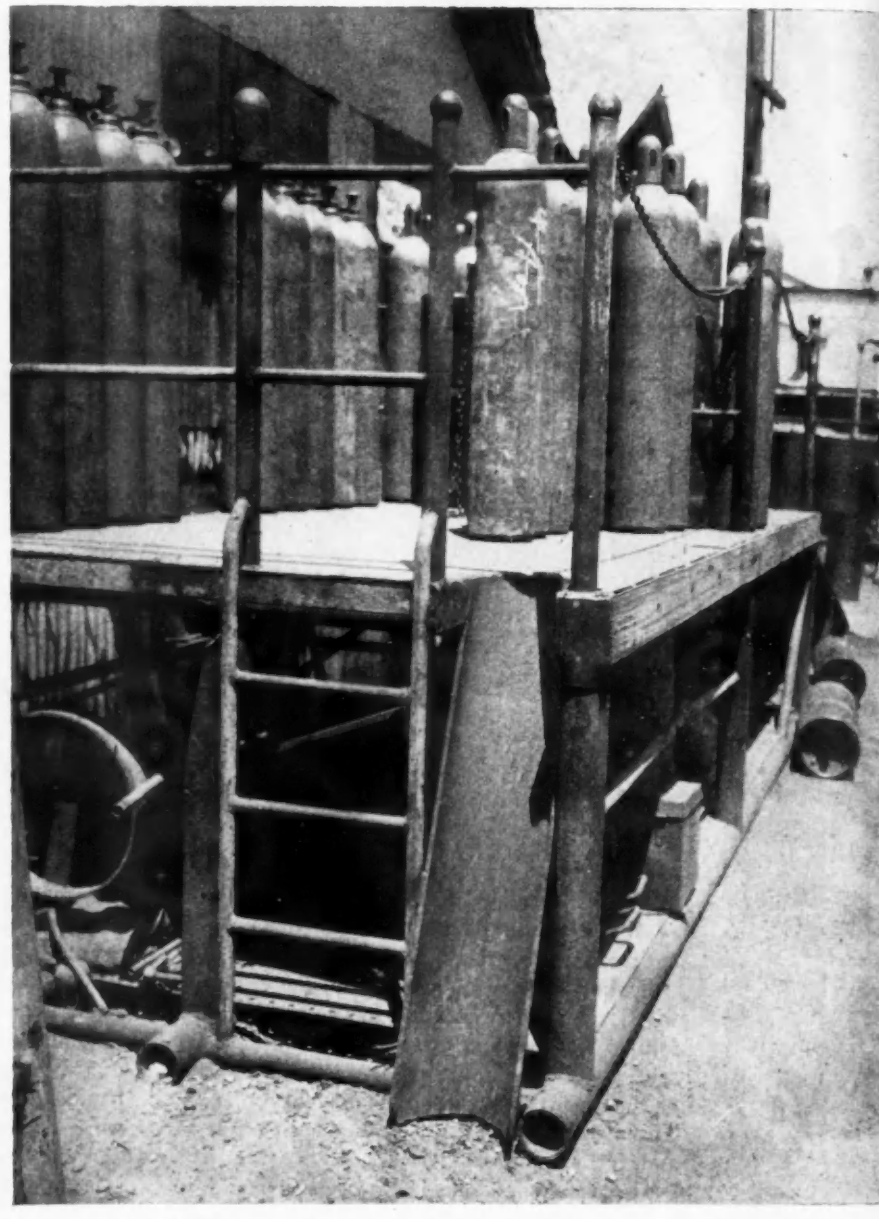
Quay D. Ellenberger, of Pittsburgh, and David L. Evans, of Bradford, Pennsylvania, will assist Dr. R. F. Pfister, laboratory director, Pennsylvania Grade Crude Oil Association in work with a water profile measuring instrument devised to determine the water input rate of a water input well, sand by sand. The device works on the principle of following a fresh water-brine interface in the well bore.

Following preliminary tests, the laboratory will conduct experiments to determine the effectiveness of selective plugging agents and actual results obtained by current well-shooting practices.

Dr. Richard V. Hughes, director of production research, revealed that the laboratory, recently set up at Bradford as part of a $300,000 research program sponsored by the Penn Grade Association, has just installed a new pump for handling a brine solution. He said the pump has a capacity of 1500 pounds per square inch. It will be used for measuring the effect of water velocity in oil recovery on long consolidated sand cores.

Another "How" Article—

Speedy Handling of Oxygen Bottles by Ingenious Chute



Rapid, safe handling of oxygen bottles around the supply and maintenance yard will save much time and equipment-hours through use of a special platform that was designed by one maintenance department superintendent. At one end of the loading dock was installed a short length of 12-inch casing split in half lengthwise, and set at such an angle that bottles may be gently lowered without danger of their slipping down too fast to be caught by the man on the ground, yet permitting it to go down in a near-vertical position for easy handling. Encircled by a pipe and chain safety railing, the platform is decked over with a single sheet of steel plating, the latter taken from a broad piece of salvaged tank siding. The broad front of the dock is used in the normal manner, for unloading of fresh supplies and taking them off from field truck units.

WELDING

MIDWEST

FITTINGS

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Representatives of The FPC, State Bodies And Gas Industry Give Their Views on:

How Supreme Court Ruling Will Affect Natural Gas

A FORUM was held at the meeting of the Interstate Oil Compact Commission in Oklahoma City June 16 at which time the recent decision by the United States Supreme Court affecting control of gas by the FPC was reviewed and discussed. Digests of these papers are presented herewith.

By CHARLES V. SHANNON
Representing the F.P.C.

IN discussing decisions which the Supreme Court of the United States recently rendered affirming the rate reduction orders of the Federal Power Commission in the Panhandle Eastern case and the Canadian River-Colorado Interstate cases, the oil industry is principally interested in the question on which four of the justices dissented. Therefore, particular attention will be given to the court's ruling that the commission, in determining the operating expenses of a regulated natural gas company for rate making purposes, may properly allow the actual costs which the company incurs in producing natural gas which it thereafter transports and sells for resale in interstate commerce.

The companies had contended that provision in Section 1 (b) of the act that the commission shall not have jurisdiction over the "production or gathering of natural gas," required that the gas which they produce be "valued" as a commodity at the point where it enters their interstate pipe line and such "value" should be computed on the basis of the "fair market price" being paid for other gas in the field.

It should be emphasized that there was no dispute with respect to the gas which the pipe line company purchases from independent producers. The price paid for such gas, being at arm's length, was allowed as an operating expense of the pipe line company. The commission, of course, has no jurisdiction over the independent producer and cannot regulate the rates at which he sells gas to the pipe line company.

The issue is limited to the gas which the interstate pipe line company itself produces and the question is whether the company should be allowed the actual costs which it incurs in producing such gas or whether the latter should be "valued" as a commodity at the point where it enters the company's pipe line.

Ruling Is Definite

Although the court divided rather sharply on the point, it appears fair to say that these cases, following the prior holding to the same effect in the Hope case definitely settle the fact that the commission has authority to allow the actual costs to the pipe line company of producing gas which it thereafter sells for resale in interstate commerce. However, the court recognized that the commission could value such gas on the basis of the field or market price of other gas, as the companies urged, if the commission found it appropriate. The court merely held that the commission was not required, as a matter of law, to do so.

In considering the FPC's method of handling this problem, it must be remembered that the only issue in a rate proceeding before the commission is a determination of the reasonableness of the rates under which the pipe line company sells natural gas at various "city gates" to distributing companies which resell such gas to retail consumers. Insofar as the pipe line company obtains such gas by arm's length purchases from independent producers, there is no particular problem. However, the gas which the pipe line company produces is not sold until it reaches the "city gate" and the price which is charged at that point represents the interstate wholesale rate to be regulated by the commission under the act.

Faced with a determination of the just and reasonable rates to be charged by the pipe line company for the gas which it produces, the FPC has taken it for granted up to now that it should see to it that the company obtains full reimbursement for all costs, including a fair profit, incurred in the process of acquiring and developing an adequate gas supply.

In considering whether the commission should substitute a so-called "field price" for the actual costs which a pipe line company incurs in producing natural gas, it must also be recognized that the process cannot be made a one-way escalator at the expense of the consumer. In other words, the approach cannot be cost of production or field price, whichever is higher. On the contrary, Section 7 as originally enacted specifically expressed "the intention of Congress that natural gas be sold in interstate commerce for resale * * * at the lowest possible reasonable rate consistent with the maintenance of adequate service in the public interest."

Actual Costs Argued

Those who urge adoption of the "field price" method therefore should give careful consideration to the actual costs which the pipe line company could no longer claim. Since the gas would be given a commodity value at the point where it enters the interstate pipe line, the company would not be assured of any return on the investment in its production and gathering facilities or of any operating expenses incident thereto.

Another consideration which should be weighed by those who urge adoption of the "field price" method is that if the gas is valued as a commodity as it enters the pipe line, the company, for rate making purposes, would become, in effect, merely a transmission company. If the gas which the pipe line company produces is valued on the same basis as the gas which it purchases, the rate of return to be allowed would be limited to the transportation facilities. In these circumstances, it would be extremely difficult for the company to support a claim for the liberal rates of return which the commission has been allowing.

The question of field price versus actual costs also requires a brief survey of some basic factors on natural gas pipe line operations. Recognition must be given to the economic fact that before a company undertakes to construct a long expensive pipe line to bring natural gas from a field to a large distribution center, it must assure itself of a supply of gas for a substantial period of time in the future.

Through leases which extend throughout the life of the recoverable gas, and through purchase contracts which have a similar life, the pipe line company normally controls the supply of gas needed in its operations for a long time in the future. The cost which the pipe line company will be required to pay for natural gas is thus largely determined at the inception of the enterprise.

These factors, in the light of the nature of natural gas, underscore the fact that there is no free market for natural gas in the sense in which there is a market for commodities generally.

Protecting the Consumer

The question of substituting a commodity value for actual costs must be related to the interests of the consumer. As the provisions of the Natural Gas Act and its legislative history clearly show, Congress vested the commission with jurisdiction to regulate interstate wholesale rates primarily to protect the consuming public from unjust and unreasonable charges. And the basic responsibility of the commission is to ascertain and carry out this congressional intention as expressed in the Act.

That Congress intended the commission in discharging this responsibility to ascertain actual costs which pipe line companies incur in producing gas which they thereafter sell for resale in interstate commerce is apparent from

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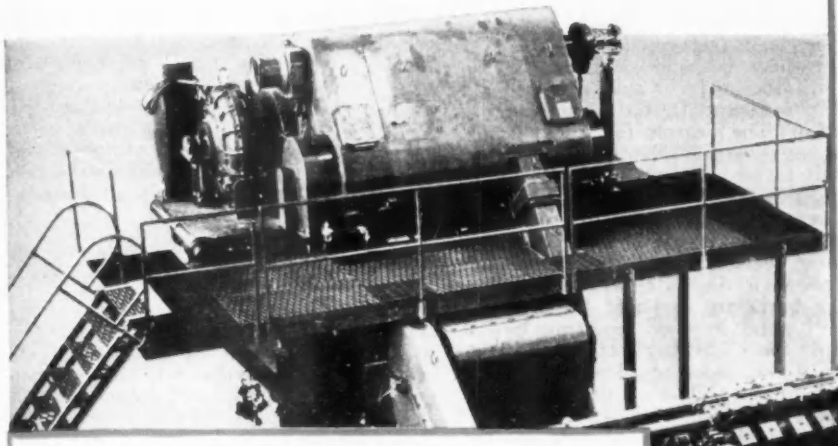

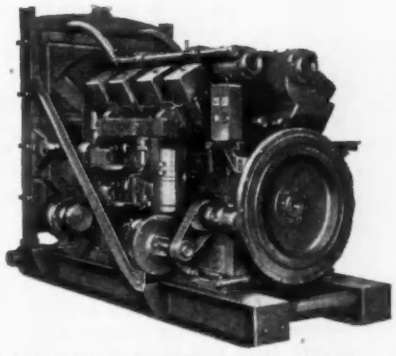

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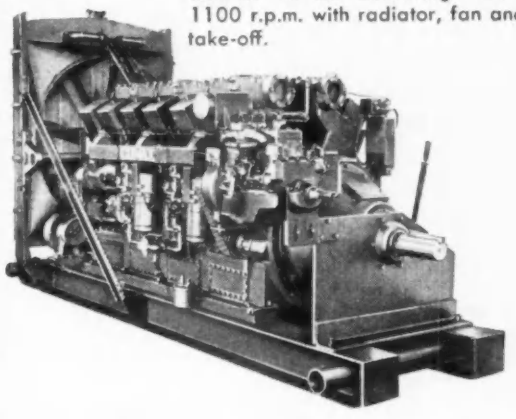

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the provisions of the act as well as its legislative history.

It appears fair to say that the commission, in allowing the actual costs to the pipe line companies of producing natural gas, has been following congressional intent. Moreover, under such method the natural gas industry is rapidly achieving stability from an investor standpoint as witness the increasingly lower interest rates and steadily improving stock prices. At the same time, rate reductions in excess of $35 million per year have been made by the commission.

While the method heretofore followed by the commission has been proven by actual experience, the achievement of sound utility regulation is a continuing process. The commission is always receptive to any suggestion which may improve the administration of its statutory responsibilities.

By RICHARD B. McENTIRE
Representing State Regulatory Authorities

INSOFAR as the regulatory bodies of gas producing states are concerned, it seems to me that the implication of recent cases raises one primary issue—namely, "What disposition should be made of production and gathering properties in determining a rate base for a natural gas transmission company?"

It is, indeed, unfortunate that the decision of the court was so evenly divided. Four of the justices, speaking through Mr. Justice Douglas, held that they should be included in the rate base at their original cost. Four of the justices, speaking through Mr. Chief Justice Stone, dissented. The dissenting opinion apparently proposes that such properties should be excluded entirely from the rate base and that cost of gas should be considered as an operating expense regardless of whether it be company-owned production or purchased gas. Both sides argue vigorously, drawing their inferences from the provisions of the Natural Gas Act. Each side makes a plausible sounding argument. Each places a different interpretation upon the intent of the Congress.

Assuming that action by the Congress could be obtained which would furnish appropriate authority and standards, it would seem that one of two methods might be devised which would give reasonable adequate and fair results.

The first possibility would be adoption of some method of fixing a fair price for the commodity at the wellhead by administrative action along the lines set forth in Justice Jackson's dissent in the Hope case. This would have the effect, of course, of enriching certain gas transmission companies. One hesitates to term it an "unjust" enrichment. In other situations, it might be exactly the reverse, and some companies might lose thereby. But, it is inescapable that some of them would be getting something for nothing.

Future Has a Stake

Such a result can only be justified on the grounds of public interest. Public interest calls for a policy which will ultimately provide the greatest good for the greatest number. It cannot be measured wholly by the standards of the present, for the future has a stake in it as well. In that public interest, the purpose of conservation is entitled to a full partnership with public utility regulation to the end that in the years to come, we and our children may enjoy the fruits of our foresight.

The second possible alternative would be even more drastic and is of a character that almost makes one hesitate to recommend it. It would be a legislative mandate divorcing production and gathering activities entirely from transmission and sale.

This is drastic because it would constitute a complete reversal of the trend of the gas industry over recent years. Prudent transmission companies have sought production of their own as an economic benefit to insure adequate supplies and reserves.

But there is much that can be said on the other side of that policy. Wildcatting is essentially not a public utility function. The search for and the discovery of natural gas (or oil or coal or any other natural resource) is inherently incompatible with the staid and regulated characteristics of public utility enterprises.

There seems to me to be little excuse for allowing the rate-paying consumer at the burnertip to profit by the wildcatter's good luck or requiring him to pay for the wildcatter's mistakes.

While the major problem in the Mid-Continent and Gulf areas presently is the depressed price of the product (which price is far below its intrinsic worth), it must be borne in mind that these suggested remedies might be equally advantageous to guard the public against unwarranted high prices. This danger is also frequently present.

It seems clear that toward the end of the life of a reserve a company's operating expenses to produce a certain amount of gas alone might exceed the reasonable value of a like quantity of gas from flush production which may be all around it. This further demonstrates the principle that exploration for, and production of, natural gas is not a utility function; and cost of recovering the product has no relationship to the value of the commodity recovered. The cost production may be less, or more, than the true value thereof.

Suggested are two possible solutions. It seems that either one of them would be preferable to the practice of applying the original cost doctrine to production and gathering facilities.

Potentialities of Gas

There are great potentialities in natural gas. At every turn, new uses and new possibilities are being developed. We are living on the threshold of what may be a "gas age." Insofar as Kansas and all of the other states where the larger portion of the gas is found are concerned, it represents one of our most valuable natural resources. Together with petroleum, it is our only source of fuel and power of any consequence.

Today, this important factor of our economic life is being piped out of our area in ever-increasing volume. It is being used for every conceivable purpose, but in the main for uses which could be served just as capably by other and more plentiful fuels.

The exploitation of this resource has been prompted in the first instance by the desire of transmission companies which had acquired production, for quick profits. The cheaper the product at the wellhead, and the larger the volume of sales—the more return was realized. Sales for inferior uses were made on the basis of price, and price alone. That price was, and is, the result of a veritable race to "get ours while the getting is good."

And now we find a new element entering the picture. The federal control imposed on the industry not only does not correct the inequities—but, on the contrary, appears to have the practical effect of freezing the economic factors and eternally keeping the situation in status quo.

Perhaps we are selfish in feeling so, but we do believe that our gas should be utilized as fully as possible and, insofar as equity and good conscience will permit, for building our area.

The interest of these producing areas constitutes one important member of that "texture of multiple strands," and, as such, we sincerely urge must be fully considered and adequately protected.

By CARL I. WHEAT
Representing the Natural Gas Industry

ANY practice on the part of the Federal Power Commission which consists merely in reducing rates for gas sold by a certain few pipe lines, through seizing upon the fact that they may enjoy lower than average production costs in the gas fields—a practice exemplified in the Canadian River Company case—cannot fail in the end to prove highly inimical to the principles of true conservation, cannot fail to hamper the states both as to conservation and as to their taxing powers, and cannot fail to harm the underlying interests of royalty holders and all other persons in the producing states who are interested in having natural gas produced and marketed at prices fair to all.

To date, the guinea pigs in this particular laboratory have been the pipe line companies which transport and sell natural gas in interstate commerce. It is they who first brought the issue to the Supreme Court. It is they whose operations are immediately affected by that court's recent ruling. And it is they who are now feeling the impact of that ruling most directly. But they are not the only interests affected, for if the wind continues to blow in its current direction, it must be evident that every individual leaseholder, every royalty owner, and every producer of gas, including gas produced in association with oil, in all of the nation's oil and gas fields where pipe line gas is being produced, will eventually find himself and his interests involved.

And at the other end of the transporting pipe lines, every user of natural gas—even one who consumes small quantities in his home—will inevitably discover that he also has a personal stake in the outcome of this controversy, for the reserves which now seem reasonably to guarantee future supplies of gas to such consumers, in connection with many pipe lines, may well become seriously affected before this storm is over.

No one can fairly take much comfort out of the situation created by these

■ CONTINUED ON PAGE 64

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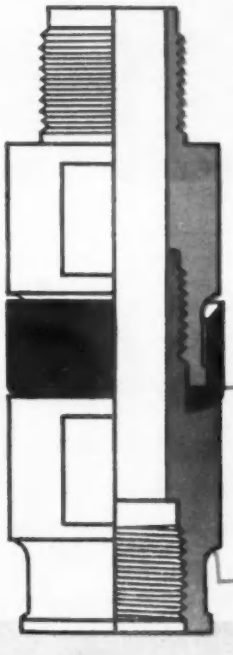
Oilmaster Cup Plungers have been installed in wells ranging in depth from 500 to 5000 feet, handling volumes from one barrel to one thousand barrels and, without exception, the performance of these cup plungers has been outstanding. This new, rugged cup plunger, in every instance, has proved its merit from the standpoint of durability and trouble-free service.



* Cross sectional view of the Oilmaster Cup Plunger showing method of individually anchoring each cup.

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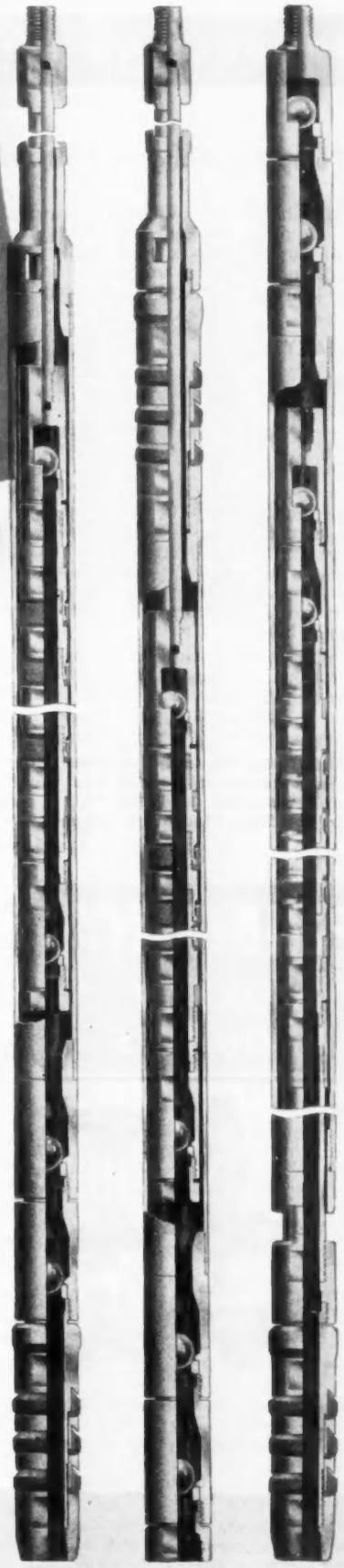

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Tail-Pump Mounting on Unitized Framework Provides Required Stability

AUXILIARY PUMPING

Walking-beam tail pumps, ordinarily found on only the old standard-end types of pumping units, may easily be installed on the newer unitized equipment if care is taken in designing a means of strapping the barrel securely to the framework of the unit. The installation pictured shows how one operator successfully sets up tail pumps on the front, or well end, of the units. The barrel assembly is fitted with a base consisting of a tee having latteral nipples at least long enough to span the width of the unit base, the nipples passing through holes cut in the end pieces of the base members as shown. One of the nipples is bull-plugged while the other end connects into the pump intake end of the supply line.

Two shop-made clamps made out of split sections of pipe slightly larger than the outside diameter of the pump barrel, are then clamped to opposite ends of the barrel, the bolts running through the clamp ears being lengths of steel rod which in turn are welded to the side of the pumping unit framework. This assembly interferes in no way with subsequent pulling operations on the well; may be removed at any time merely by removing the two clamps.

Mounting of the pump on a screwed fitting in the supporting line permits any slight shift in alignment without overloading the connections or introducing any stresses in the pump mechanism which might cause binding or localize wear.

To protect the pump further against possible cramping or binding, the suction and discharge lines should be swing connected, or should have incorporated in them, close to the pump, connections which can shift without transmitting stresses to the pump.

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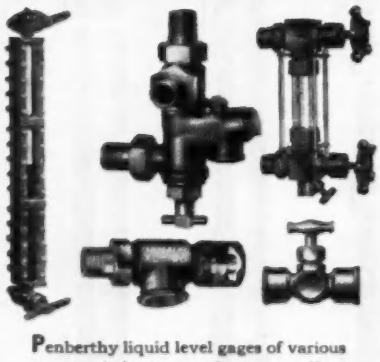

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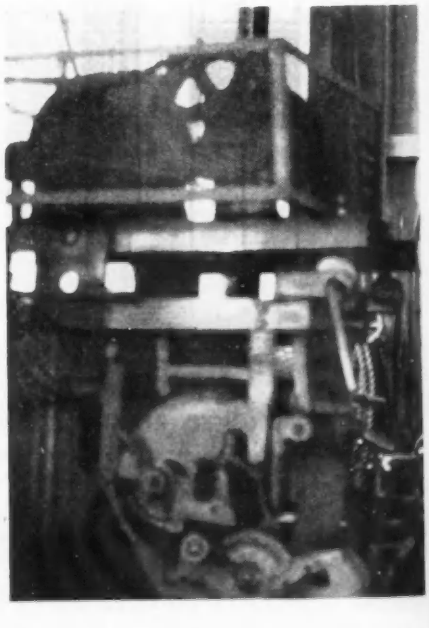
SHOP TOOL OPERATION

To change the speed quickly and to shut off the power instantly, the driving mechanism of a shop lathe can be equipped with a built-in device. A frame is constructed above the driving head to support the motor. The frame is made hinged at the back and with free-floating front. To provide belt adjustment, a pair of eccentric cams are installed on the solid frame of the lathe head, making contact with the front members of the motor support.

A lever as part of the eccentric shaft makes it possible to instantly release the friction drive provided by the belt, thus stopping the movement of the lathe. By releasing the tension by dropping the cams downwards, the belt can be changed from one size of pulley to another more easily than when the lathe is driven by the conventional overhead line shaft.



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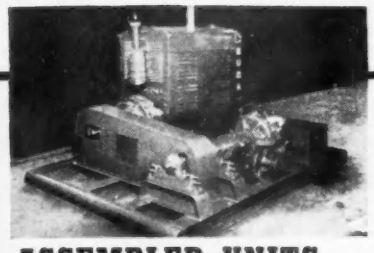

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PRODUCTION HINTS

Portable Air Compressor Meets Varied Lease Needs

A producer in Kansas was unable to locate the type of air compressor and tank usually found around filling stations, and therefore made one out of materials at hand. Having a small one-cylinder engine and a compressor at hand, he mounted them on a piece of channel iron. An 8-foot piece of 16-inch pipe was welded shut and the unit mounted thereon as shown in the photo. The wheels were from a couple of wornout casing buggies, the axles of angle iron. A tow bar allows the machine to be moved about the grounds, or dragged up on a truck to be transported to various leases.

LEASE AIR COMPRESSOR

Since the axles and wheels meet in a simple sleeve contact, care must be exercised when towing the device around the lease to see that the critical speed for such a bearing be not exceeded. Most of the shifting is done by hand, or the unit can be hand-steered, while motive power is applied through a winch line.

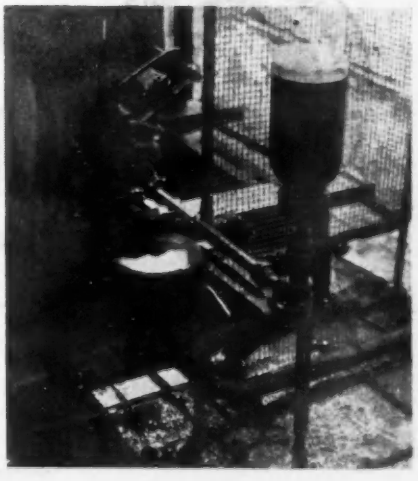
Lube Oil Storage Reservoir Safeguards Engine

Single-cylinder, slow-speed pumping engines rigged up to use well gas as fuel will run for long periods of time without much servicing, making them ideal for wells that are remotely situated from the pumper's usual service tour. To further make these units independent and self-sustaining, one operator assembled a lube-oil storage reservoir which greatly prolongs the need for replenishing the crank-case oil. A common 2-quart fruit jar was filled with oil and inverted over a fitting connected by small piping to the crank case. By restricting the flow of oil to a predetermined rate, the oil can be fed into the engine just as fast as it is consumed. Use of a glass jar permits visual check of the remaining supply every time the pumper arrives at the well.

ENGINE LUBRICATION

Supporting the oil-filled jar is a telescoping prop made of a short length of sucker rod run through an equal length of ¾-inch pipe. A lock screw run through a nut welded to the outside of the pipe permits adjusting the support to any height. The sucker rod portion rests upon the ground and the pipe, to which a small yoke has been welded at the upper end, supports the 90-degree elbow beneath the jar.

Where there is danger of accidental contact with the storage jar, or where there is possibility of flying objects—as when the lease road is paved with crushed rock or shell—the addition of a shield of hardware cloth around the device will prevent accidental breakage and consequent loss of oil and, more im portant yet, operation without adequate lubrication is avoided as the provision of such safeguard insures the continued functioning of a protective device which, when installed, reduces the frequency of inspection checks.



Natural Gas Forum

■ CONTINUED FROM PAGE 60

latest judicial pronouncements. The FPC must find little to crow over—for it will obviously have to walk a highly precarious, legalistic tight rope which may in practice prove extremely difficult. State regulatory authorities, on the other hand, had supposed that they possessed at least some powers over production and gathering operations, but if these recent decisions stand, the states will assuredly be faced sooner or later with federal rulings affecting every phase of production — for when a regulatory agency controls the purse strings of an operator it effectively controls everything the operator does. (It might be added that, if the federal authorities should also find themselves in control of the end uses of natural gas, at the outlets of the great interstate pipe lines, the states will soon discover that their long-asserted conservation powers have become largely dissipated—vented to the air, as a natural gas man would put it.)

Finally, the face of Congress should be red, for the justices of the Supreme Court have laid the responsibility in this situation fairly upon the legislature, by their cramped construction of its carefully chosen words forbidding the regulation of production and gathering by the FPC under the Natural Gas Act.

In the Canadian River case the commission and the court were obviously faced with the most difficult and certainly the closest rate-making situation that can arise under the production and gathering issue—an integrated operation of gas leases, gas wells, gathering system and interstate transportation pipe line facilities, with a single company owning and operating the entire group of properties, drilling the wells, bringing the gas to the surface, gathering it at a central point, pumping it through the interstate transmission line, and finally selling it at the terminus of the pipe line. If it were not for the peculiar nature of natural gas, as a subject of price regulation, and if it were not for legislation prohibiting regulatory powers over production and gathering of natural gas, we would therefore find little basis on which to criticize the commission's adopted procedure, under usual and ordinary rate-making principles.

Not the Last Word

But the legislative prohibition does exist, and it seems clear that the Canadian River decision does not in any sense constitute the last judicial word we are to hear on this subject. In fact, the FPC attorney must at this juncture find it most difficult to advise that body. In the light of the curious division of the court in this clearest possible case for the assumption of this power, the commission's house seems to rest on a bank of not too-solid sand.

There are many variations of typical situations. Except for cases involving integrated operations, as exemplified by Canadian River, all involve actual sales of gas at the conclusion of production or gathering. If the commission should be able successfully to maintain an assertion of jurisdiction over all such sales on the theory that they are in fact "sales in interstate commerce," and that the fixing of rates at the conclusion of production and gathering is not really a regulation of production and gathering operations, it is obvious that every producer of natural gas, whether it be dry gas or gas produced in association with oil, will face regulation of both rates and other phases of his business by federal authority under the Natural Gas Act, if he sells any of his gas to an interstate pipe line.

It seems apparent that if the present trend should continue unchecked, the commission will eventually find itself master of the field and arbiter of the price of all wellhead sales of gas where eventual transportation in interstate commerce is involved, with all the confusion and variation in rates that cannot then be escaped under its "cost" theory of production rate-making.

Alternatively, it must find itself precluded from authority in all such cases, except possibly in the integrated operations situations exemplified by the Canadian River case. Even in such instances, the adoption of the fair field price or commodity value of the gas as the appropriate operating expense allowance would serve at once to clear the atmosphere. There is really no consistent middle ground, and it is suggested that the commission would find itself with a bear by the tail if it should finally be successful in maintaining the cost alternative overall.

The other alternative apparently involves a single simple principle—the recognition that natural gas is a commodity to which the laws of supply and demand naturally and inevitably attach a price.

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Distillate Fuel Oil Not Increasing As Desired; Other Output Satisfactory

Favorable statistical trends in the industry were reflected in figures of the American Petroleum Institute for the week ended June 16. In consequence of record-breaking production of crude oil and near-record refinery runs, production of principal products satisfactorily fulfilled current demand. Stocks of gasoline were reduced subnormally for the season, and although inventories of distillate fuel oil did not increase as much as desirable, there was a material addition to stocks of residual fuel oil.

United States crude production of 4,888,000 barrels daily was 35,000 a day more than in the previous week and 1000 a day more than the previous record high output of two weeks before. The new rate was 320,000 a day or 7 percent more than production in the comparable week last year. Crude runs to stills averaged 4,915,000 barrels daily, up 88,000 from the week before and 174,000 a day or nearly 4 percent more than runs in the corresponding week last year. The refinery throughput for the week exceeded domestic production of crude, as in some earlier weeks this year. While imports of crude are now substantial, there occurred a withdrawal of 2,527,000 barrels of crude from storage in the week ended June 9, the Bureau of Mines reported. Crude stocks then totaled only 221,552,000 barrels, or within 3,000,000 barrels of the 23-year low reached in early March of this year.

Gasoline Production

Production of gasoline in the United States totaled 15,132,000 barrels in the week ended June 16, down 124,000 from the week before, but 962,000 barrels or 6.8 percent more than output in the corresponding week last year. However, there was a reduction of only 392,000 barrels during the week in the total of stocks of finished and unfinished gasoline, which declined to 87,504,000 barrels. That amount was 3,179,000 barrels or 3.8 percent more than the 84,325,000 barrels held June 17 last year. The reduction in stocks occurred when civilian grade inventories were reduced in larger amount than military grade accumulated.

The civilian grade stocks declined to 46,370,000 barrels, a decline of 661,000 barrels for the week, and the new total was approximately a million barrels less than the 47,269,000 barrels held on the corresponding date last year. Military grade increased 269,000 barrels in rising to 41,134,000 barrels, and that amount was about 4,000,000 barrels more than the 37,056,000 barrels held a year previous.

Gain Registered

Gas oil and distillate fuel oil production of 5,342,000 barrels in the week of June 16 was 500,000 barrels more than in the previous week and 515,000 barrels or 10.7 percent more than output in the corresponding week last year. Stocks of these lighter oils were increased 58,000 barrels during the week, less than usual for this season, and the 30,397,000 barrels then on hand was 3,682,000 barrels or 10.8 percent less than the 34,079,000 barrels held June 17, 1944.

Residual Fuel Oil

Residual fuel oil production of 9,252,000 barrels in the week ended June 16 was 130,000 barrels less than that in the previous week although 70,000 barrels or about 1 percent more than production in the corresponding week last year. Stocks of residual were increased, however, by 486,000 barrels during the week, having risen to 39,482,000 barrels. That amount was 13,186,000 barrels or 25 percent less than the 52,668,000 barrels reported as of June 17 last year.

Price Advances Listed For Elk Basin Crudes

Stanolind Oil and Gas Company announced a higher price schedule for Frontier and Grass Creek light crudes from the Elk Basin pool of Montana and Wyoming, retroactive to 7:00 a.m., June 1, and authorized by OPA. Oil below 21 gravity was posted at 85 cents a barrel; 21-21.9 at 87 cents with increases of two cents per point up to $1.25 per barrel for light crude of 40 gravity and above. The old schedule was a flat $1 per barrel. This increase affects only the light crude from the Frontier and Grass Creek sands.

Trends of Operations and Changes in Stocks

Figures on crude stocks are from Bureau of Mines weekly reports; all others from American Petroleum Institute weekly reports, which are estimates on Bureau of Mines basis.

(All figures in thousands of barrels—add 000)

HIGHS AND LOWS OF RECENT YEARS

ITEM	Crude Oil Prod. Barrels Daily	Crude Oil Prod. Week Ended	Runs to Stills Barrels Daily	Runs to Stills Week Ended	Crude Stocks Barrels	Crude Stocks Week Ended	Gasoline Stocks Barrels	Gasoline Stocks Week Ended	Gasoil and Distillate Stocks Barrels	Gasoil and Distillate Stocks Week Ended	Residual Fuel Oil Stocks Barrels	Residual Fuel Oil Stocks Week Ended
Highs:												
1941	4,337	11–22	4,120	10–18	266,187	3–29	99,727	3–29	[1]54,983	11–15	102,448	1– 4
1942	4,337	2– 7	3,961	1– 3	263,208	3–28	[1]109,281	3–14	47,861	11–14	95,857	1– 8
1943	4,436	11–13	4,331	12– 4	245,752	5–29	94,159	3–20	47,187	11–27	72,881	1– 2
1944	4,762	9–30	4,798	12–30	240,992	1– 1	89,162	4– 1	48,863	10–28	64,744	10– 7
1945	[1]4,888	6–16	[1]4,950	5–26	224,079	6– 2	99,012	3–24	38,298	1– 6	56,074	1– 6
ows:												
1939	[3]1,601	8–26	3,125	2–18	[2]229,127	10–12	71,152	10– 7	20,722	4–15	105,397	4– 8
1941	3,364	1–11	3,490	1–18	240,399	11–15	79,923	10– 4	28,382	4–12	90,914	7–12
1942	3,297	7– 4	3,393	5–23	231,896	12–12	75,934	12– 5	29,240	4–25	72,962	12–26
1943	3,821	1– 9	3,579	3–18	232,191	1– 9	68,182	10–16	30,732	4– 3	57,596	12–25
1944	4,357	1– 1	4,228	2–12	220,258	9– 9	76,302	1– 1	30,232	4–19	49,737	3–18
1945	4,678	1– 6	4,656	1– 6	[4]218,675	3– 3	86,616	1– 6	26,483	3–17	38,548	5–26

TRENDS OF 1944 AND 1945

Trends in Week Ended:	Crude Oil Production Daily	Crude Oil Runs to Stills Daily	Crude Oil Stocks Week End	Gasoline Production Weekly	Gasoline Stocks Week End	Gasoil and Distillate Production Weekly	Gasoil and Distillate Stocks Week End	Residual Fuel Production Weekly	Residual Fuel Stocks Week End
1944:									
January 1	4,357	4,453	240,992	13,192	76,302	4,575	42,310	9,141	57,380
January 29	4,409	4,359	240,251	13,427	81,075	4,054	37,266	8,889	52,857
February 26	4,423	4,377	237,137	13,183	85,248	4,558	33,766	8,952	51,387
March 25	4,385	4,443	236,285	13,362	87,287	4,979	31,319	9,013	51,669
April 1	4,383	4,435	234,667	13,824	89,162	4,450	30,530	8,367	51,326
April 29	4,431	4,300	235,342	13,126	88,342	4,284	30,236	8,398	49,985
May 27	4,514	4,532	234,423	13,502	86,468	4,702	32,035	8,568	49,812
July 1	4,587	4,638	228,860	14,052	83,559	4,496	35,360	8,872	52,235
July 29	4,608	4,627	225,112	14,115	82,665	4,833	38,135	8,900	56,280
August 26	4,667	4,698	222,931	14,112	80,740	4,566	41,453	8,680	59,839
September 30	4,762	4,775	222,393	14,494	78,028	4,622	45,329	9,292	64,226
October 28	4,740	4,658	223,235	14,117	79,058	4,772	48,705	8,985	64,382
December 2	4,712	4,693	221,591	14,853	80,427	4,082	45,832	8,981	61,727
December 9	4,704	4,552	220,258	14,611	80,880	4,056	44,436	8,923	60,458
December 16	4,695	4,537	222,075	14,145	82,747	4,353	42,413	8,727	59,280
December 23	4,729	4,682	222,575	14,635	83,355	4,605	40,846	8,798	58,509
December 30	4,705	4,798	222,998	15,342	86,614	4,257	39,495	9,156	57,430
1945:									
January 27	4,727	4,756	221,310	14,957	88,223	4,843	33,651	9,252	51,119
February 24	4,777	4,803	219,351	15,500	95,972	4,958	28,753	9,084	46,713
March 31	4,781	4,677	223,782	14,644	98,758	4,548	26,889	9,184	41,745
April 28	4,805	4,780	223,474	14,633	94,068	4,636	28,273	9,379	39,813
May 26	4,887	[1]4,950	222,831	15,194	89,121	4,667	29,184	9,670	38,548
June 2	4,859	4,804	224,079	15,317	88,696	4,857	29,819	9,437	39,022
June 9	4,853	4,827	221,552	15,256	87,896	4,842	30,339	9,382	38,996
June 16, 1945	**[1]4,888**	**4,915**	.....	**15,132**	**87,504**	**5,342**	**30,397**	**9,252**	**39,482**
June 17, 1944	4,568	4,741	[5]231,290	14,170	84,325	4,827	34,079	9,182	52,668
Change:									
In week	+35	+88	—2,527	—124	—392	+500	+58	—130	+486
In year	+320	+174	—9,738	+962	+3,179	+515	—3,682	+70	—13,186
In year	+7.0%	+3.7%	—4.2%	+6.8%	+3.8%	+10.7%	+10.8%	+0.8%	—25.0%

[1] All time peak. [2] Lowest between January, 1922 and July 1, 1944. [3] Lowest since October, 1922 due to shutdown of six Mid-Continent states. [4] Lowest since December, 1921. [5] Stocks, June 10, 1944

Contract Let for 19 Miles Of Pipe Line at Hugoton

Anderson Brothers, Houston pipe line contractors, have been awarded contract to construct 19 miles of 16-inch and 24-inch lines for Northern Natural Gas Company at Hugoton, Kansas. Contract was also awarded by Northern Natural Gas for the construction of a 16-mile loop of 24-inch line with a major river crossing near Ellsworth, Kansas. Work will be in charge of R. E. Wallace.

Anderson Brothers are completing four 8-inch lines across the Chartain River for the Sinclair Refining Company. This job, in charge of Trece Boyd, is located near Brunswick, Missouri, and has been shut down for several weeks because of floods. Other contracts in this area will be started as soon as the water recedes.

The Houston contractors have partly completed about 300 miles of small-diameter screw pipe lines and other facilities for Northern Ordnance, Inc. at Pleasantville, Pennsylvania. Wilford Rose is superintendent.

Arkansas Louisiana Gas Company has awarded Anderson Brothers contract for laying 7½ miles of 20-inch pipe line, including various water crossings, near Shreveport, Louisiana. This work will be done by Claude M. Anderson, owner of Allied Welding and Engineering Company.

Anderson Brothers also have moved in equipment to clean up the right-of-way on the 21 miles of 8-inch line and gathering system and crossing on the Trinity River for Lone Star Gas Company. Water and mud conditions prevented the clean up work at the time of construction. Jim Rogers is in charge.

Meantime, the contractors have started work on 25 miles of 8-inch line for Stanolind Pipe Line Company at Salt Lake City, Utah, and 41 miles of 10-inch line at Rangely, Colorado, also for Stanolind. E. E. McCoy is in charge of the Utah job while Manuel D. Gier is superintendent at Rangely.

Shell Pipe Line Lists Personnel Promotions

H. H. Anderson, vice president, Shell Pipe Line Corporation, has announced the following personnel promotions:

R. C. Nicholson, superintendent of oil movements with offices at Houston, will have general supervision of oil schedules, tenders, field gauging and line dispatching with G. H. Miller, supervisor of oil schedules and tenders, assisting. L. F. Franklin, chief dispatcher, West Texas-New Mexico area, with offices at Colorado City, Texas.

Other chief dispatchers are U. W. Clark, Mid-Continent area, Cushing, Oklahoma; M. A. Leonard, Texas-Gulf area, Houston, and F. V. Maloney, Bayou Pipe Line System, Houston.

The promotions followed retirement of two well-known pipeliners, each with some 27 years of Shell service. Ben L. Browne, heretofore chief dispatcher, head office, and Tom J. Madden, chief dispatcher, West Texas-New Mexico area. Madden was eligible to retire at age 60 in December, 1941, but elected to remain at his post until after V-E day.

Stock Issues Is Approved For Proposed Hugoton Line

The Securities and Exchange Commission has approved stock issues acquired by American Light & Traction Company, for a proposed pipe line to be built from the Hugoton gas field in Kansas, Oklahoma and Texas, to Detroit.

A branch of the proposed line would extend into Wisconsin to furnish natural gas to communities served by American Light subsidiaries. Communities in Illinois, Iowa and Missouri also would be served.

In approving acquisition of the stock by American Light & Traction Company, the commission stated that the order "does not constitute approval either of the proposed pipe line, jurisdiction as to which rests elsewhere, or of the ultimate ownership or of the financing of any future pipe line undertaken by the new company."

10-Inch Line from Willow Springs to Daingerfield

Rogers Lacy of Longview, Texas, and associates are purchasing right-of-way for the construction of a 36-mile 10-inch natural gas line to extend from the Willow Springs deep area, situated east of the Gregg County sector of the East Texas field, to Daingerfield and supply fuel to the Lone Star Steel Company's plant.

Gas production in the Willow Springs field has heretofore been used primarily to supply Rogers Lacy and Lone Star Produing Company's recycling plant, which is being dismantled for service in the Carthage field, Panola County, Texas.

Carthage Gathering Lines Keep Contractors Engaged

United Gas Company has contractor's crews engaged in the installation of its 45 miles of 6- to 20-inch natural gas gathering lines in the Carthage field, Panola County, Texas.

Company has broken ground for its absorption type natural gasoline plant, situated 2 miles south of Carthage. The company has authorized the construction of a 24-inch transmission line to relay the residue gas from this plant to its system at Monroe, Louisiana.

Bully Camp Has Outlet

Gulf Refining Company has completed and put into operation 6½ miles of 4-inch oil line from the Bully Camp field, Lafourche Parish, Louisiana, to a barge loading terminal on the intracoastal canal at Larose. This is the first pipe line outlet for the Bully Camp field. Contractor on the job was Sharman & Allen of Houston.

FPC Sets September Date For Natural Gas Hearing

Repercussions of the recent Supreme Court decision in the natural gas rate cases came from the Federal Power Commission last week, when it announced it would hold a hearing in Washington September 12 to receive oral argument on the lawfulness of proposed increased rates for natural gas sold by United Fuel Gas Company, Warfield Natural Gas Company, Cincinnati Gas Transportation Company and Huntington Development and Gas Company to each other, to other subsidiaries of Columbia Gas and Electric Corporation, and to non-affiliated companies.

The hearing was ordered following consideration of applications requesting oral argument filed by the four companies and by West Virginia authorities, the commission commenting that "it is desirable that such applications be granted for the purpose of hearing oral argument upon the issues involved in these proceedings in the light of the recent decisions of the Supreme Court."

Supreme Court to Review Champlin Pipe Line Case

The United States Supreme Court will review a recent decision by a lower court in which it was held that a pipe line constructed by Champlin Refining Company was a common carrier and subject to ICC jurisdiction. The line extends from Champlin's refinery at Enid, Oklahoma, to terminals in Hutchinson, Kansas, Superior, Nebraska and Rock Rapids, Iowa, and is used to transport refined petroleum products. A special three-judge federal court in the Western Oklahoma district held the line was a common carrier within the meaning of the Interstate Commerce Act.

Carthage Condensate to Be Handled in New Refinery

Carthage Refining Company with headquarters at Houston will erect a 2000-barrel daily capacity refinery near Carthage, Texas, to operate on condensate produced in the Carthage field, Panola County. Most of the equipment will be second-hand. The plant is due to begin operations within 4 months. E. C. Scurlock of Houston, head of Scurlock Oil Company, is president of the new firm, while Alfred Glassell of Shreveport is vice president.

Texas Company Completes Line As a Louisiana Tie-in

The Texas Company has put into operation three miles of 3-inch propane line near Morgan City, Louisiana. The line is a tie-in between the company's Bateman Lake cycling plant and The Texas Pipe Line Company's pump station at Berwick. Sharman & Allen, Houston, was the contractor.

Program for Mercedes Area Calls for 23-Well Total

Present drilling schedules of Ultramar Company, Ltd., of London, in the Mercedes field of Venezuela, should result in a total of 23 wells for the area by the end of the first quarter of 1946. Ultramar, a holding company, owns all the stock of Caracas Petroleum, S.A. The latter and The Texas Company jointly own S.A. Petrolera las Mercedes and S.A. Petrolera Manapire, which together hold rights to 964,000 acres of exploitation parcels and 271,000 acres of exploration concessions in eastern Venezuela. In addition, Caracas Petroleum Company has 129,000 acres of exploitation parcels and 468,000 acres of exploration concessions. A pooled acreage arrangement has also been effected between the Caracas and Texas companies involving 228,000 acres of Caracas properties and 165,000 acres of Texas concessions, to be developed jointly on an equal interest basis.

The Mercedes field now has 8 shut-in wells, one dry hole, one uncompleted hole, and four drilling operations in progress. Well initials range from 100 to 900 barrels daily on flow through chokes. A deep wildcat test is planned this year in one of the jointly-held concessions in the foothills belt north.

Proved acreage has been developed on wide spacing for seven miles along the Mercedes structure. Objective of the present campaign is to prove up sufficient production potential to justify a pipe line to the coast where negotiations are under way for seaboard terminal facilities.

Socony Vacuum Is Drilling Second Barinas Wildcat

Socony Vacuum Oil Company has spudded in at Silvestre 1, second wildcat test in the Apure basin, state of Barinas, Venezuela. It is 19 miles southeast of the town of Barinas and on the west side of the Rio Santo Domingo. It is approximately 40 miles northwest of the San Vicente site, where the company abandoned its first Barinas wildcat several weeks ago.

An unspecified number of wildcats will be put down by Socony Vacuum in Barinas during the next 18 months for information on which to base selection of exploitation acreage.

Can Condemn for Roads

California Attorney General Robert W. Kenny has ruled that private property may be condemned to provide right of way for the development and production of oil and gas on state-owned lands. Kenny said he was upholding the constitutionality of the Public Resources Code, authorizing condemnation of private property for such purposes.

Wildcat in Capacho Tract Being Drilled by Creole

Newest wildcat venture of Creole Petroleum Corporation in Venezuela is the Capacho 1, now drilling below 5000 feet in the southwestern corner of the district of Cedeno, Monagas. It is 1½ miles south of the new Creole-Meneg pipe line and about the same distance from the Anzoategui boundary. Nearest active drilling operation is the Morichito test of Venezuelan Atlantic Refining Company, six miles north. Closest production is in the Santa Barbara-Travieso area, 14 miles east.

Creole's Maturin 5 wildcat, drilled to nearly 9200 feet on the western outskirts of the town of Maturin, east of the Jusepin field, was being completed as a water well for the municipality.

Delta Amacuro, Venezuela, Field Opened by Texas

Texas Petroleum Company (Venezuela) has completed a flowing well at Texas 1 northeast of the town of Tucupita, Delta Amacuro, Venezuela, to open a new field on the Temblador trend.

A stepout test will be started immediately eastward. The discovery well was spudded on February 22, following abandonment of the company's first wildcat in the area, drilled 11 miles to the north. The new producing well is bottomed in thick sandstone at 5754 feet.

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Professor of Geology, University of Wisconsin

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8. The Clastic Sediments
9. Sediments of Chemical Deposition
10. Sediments of Chemical Deposition: Siliceous, Ferruginous and Manganese Sediments
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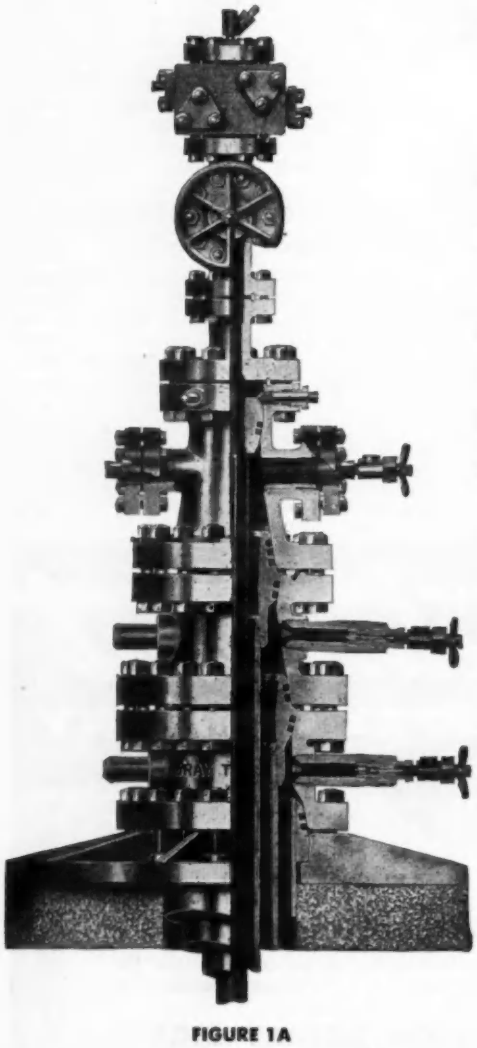

FIGURE 1A

Complete Well Head Assembly equipped with Composite Manifold, Valve Removal, Installation and Removal.

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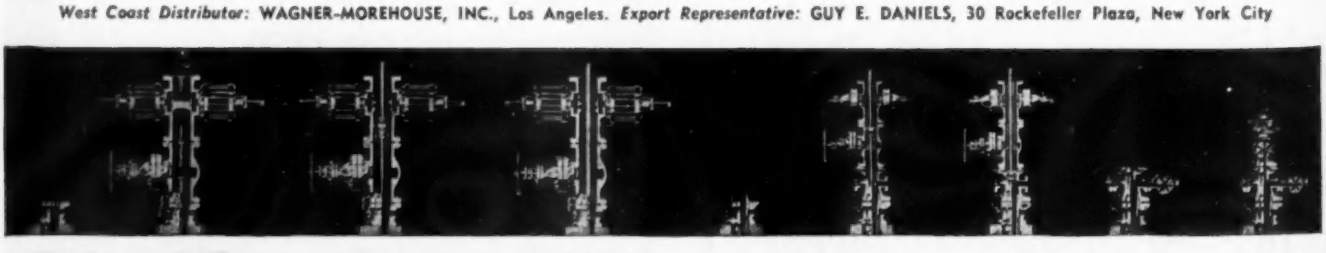


Casing Head Attached | Drilling | Running Casing | Casing Landed | Drilling Control Equipment Removed | Drilling-in and Running Tubing | Tubing Landed | Control Equipment Removed | Manifold Attached

☆ Oklahoma

Osage, Tillman Counties Report New Fields Opened

New pools opened in Osage, Tillman counties; new Garber pool outpost gets oil show on drill-stem test; Magnolia stakes second well in Chitwood gas-distillate area; Kingfisher County wildcat northwest of West Edmond tests salt water, some gas; South Moore flank well shows in Wilcox.

Osage County: Another oil pool was chalked up between the Manion, North Manion and Bandwheel pools with the completion of W. W. Henry et al's Osage 1-3, SE SW NW 7-23n-9e. With sand logged from 2110 to 2166 feet, total depth, and after the well was shot with 100 quarts of nitro it gauged 100 barrels of oil, natural, in the first 24 hours. The strike has caused a re-study of well logs and geological surveys in the area.

Tillman County: Continuing its play in the southwestern area of Oklahoma, The Texas Company has opened another new area 1½ miles west of the Frederick pool. Smith 1, NW NW SE 36-2s-18w, located on an anticlinal structure, was completed as a 7-barrel daily pumper from the Canyon lime in the Pennsylvanian topped at 2990 feet. Although a small well which is producing some water, electrolog showed pay at 2990-95, 3020-40 and 3050-70 feet, plugged back from 5428 feet, total depth. The discovery has been named South Frederick.

Kingfisher County: Hopes that another West Edmond strat trap was about to be located dimmed when Gulf Oil Corporation's Triplett 1, C NE SW 8-15n-5w, drilled plug in the Bois D'Arc section of the Hunton lime and recovered salt water, a little gas and no oil. The well topped the Hunton lime at 7362 feet, drilled to 7405 feet and set pipe at 7380 feet. The well was shut down.

Grady County: Magnolia Petroleum Company staked its second location in the deep gas-distillate area near Chitwood and was building roads for Britt Unit 1, about a mile southeast of the discovery well near Alex. Location is 1207 feet from the west line and 1426 feet from the south line of 3-4n-6w. Magnolia's Cunningham 1, CSE SE 33-5n-6w, pool opener, has been shut in since it showed for a big gas-distillate producer in sand between 10,879-882 feet.

Cleveland County: Oil shows from second Wilcox sand were reported at Barnsdall Oil Company's Mollman 2, NE SE 27-10n-3w, and operator expects a producer which will extend the west flank of the pool another location. Top of the Wilcox was had at 8852 feet and core showed saturation.

On the south edge of the field Sohio Petroleum Company's Pahlman 2, NE NE NW 35-10n-3w, set pipe and was preparing to test after topping the Bartlesville zone at 7750 feet and the pay section at 7789 feet. It was drilled to 7865 feet, total depth.

The Carter Oil Company's Turner 1, CSW NW 26-10n-3w, drilled to 8940 feet, drilled plug, set packer at 8890 feet and on drill-stem test recovered some oil and salt water. Prospects are poor.

Garfield County: Drill-stem test at Mariner 2, NW SE NW 6-22n-3w, a Cities Service Oil Company operation south of the company's discovery well for the New Garber area, recovered 240 feet of oil-cut mud from second Wilcox sand topped at 5151 feet and tested between 5139-62 feet. Drilling continues to the Arbuckle lime zone which is producing in two other wells in the field. The Wilcox showed for 10 million feet of gas per day in the discovery well.

McClain County: Cities Service Oil Company's Lawson 1, SW NW 22-5n-4w, deep test in the Anadarko Basin feature, was reported to have recovered some oil and gas on drill-stem test of the Bromide sand between 10,478-488 feet and was drilling slowly below 10,546 feet.

Payne County: Two miles southeast of the small Glencoe pool, Northern Ordnance, Inc., completed DeWitt 1, NE SW SW 34-20n-4e. At total depth of 3585 feet casing was perforated with 35 shots between 3569-75 feet and the well was completed pumping 35 barrels of 33-gravity oil daily plus a like amount of water.

☆ Kansas

Wildcat South of Albert Gas Area Is Showing Oil

Wildcat south of Albert gas area showing oil; Transwestern to test Russell County wildcat; Atlantic gets show west of Nunn pool; Trego test junked; good producer completed west of Trapp pool.

Barton County: On the west side of the Trapp pool, Bridgeport Oil Company completed Schneider 1-B, NE NW SE 12-16s-14w, for 398 barrels a day from Arbuckle lime after acidizing between 3313-16 feet. Black-Marshall Oil Company's Willcutt 1, SW SE SW 2-19s-15w, set 5-inch casing to test a good oil show in Arbuckle lime cored from 3613-17 feet. The wildcat is south of the Albert gas area.

Russell County: Logging a good oil show in Arbuckle lime between 3326-45 feet, total depth, Transwestern Oil Company set pipe and was preparing to test at Rude 2, SE SW SE 26-15s-13w. The test is two miles notheast of the Sellens pool.

Finney County: Two miles west of the

Wells Completed in the United States in Week Ended June 23, 1945

Data preliminary and subject to revision. Revised and more complete data on all completions shown in monthly summary of drilling, published in second issue of each month. More detailed data on wildcats published in third issue of each month.

State or District	FIELD COMPLETIONS: New Wells *Oil	Gas	†Input	Dry	Total	Old Wells Deepened	WILDCAT COMPLETIONS *Oil	Gas	Dry	Total	ALL COMPLETIONS: This Week	Last Week	Cumulative: This Year	Last Year
Alabama	....	....	....	....	....	....	....	....	....	....	....	2	13	13
Arizona	....	....	....	....	....	....	....	....	....	....	....	....	....	3
Arkansas	1	....	....	1	2	....	....	....	....	....	2	12	83	94
California	34	....	....	2	36	....	....	....	8	8	44	49	1,018	944
Colorado	....	....	....	....	....	....	....	....	....	....	....	1	12	11
Florida	....	....	....	....	....	....	....	....	1	1	1	....	9	1
Georgia	....	....	....	....	....	....	....	....	....	....	....	....	4	1
Illinois	27	....	1	7	35	....	2	....	5	7	42	32	780	788
Indiana	2	....	....	1	3	....	....	....	4	4	7	4	139	130
Iowa	....	....	....	....	....	....	....	....	....	....	....	....	1	2
Kansas	17	....	....	10	27	2	....	....	10	10	39	40	739	820
Kentucky	5	....	....	4	9	....	....	....	1	1	10	7	206	326
Louisiana	13	2	....	6	21	1	1	1	2	4	26	20	461	340
North Louisiana	6	2	....	4	12	1	1	1	1	3	16	11	156	113
South Louisiana	7	....	....	2	9	....	....	....	1	1	10	9	305	227
Michigan	....	....	....	....	....	....	....	....	....	....	....	14	338	289
Mississippi	2	....	....	....	2	....	....	....	4	4	6	8	183	63
Missouri	....	....	....	....	....	....	....	....	....	....	....	....	16	12
Montana	6	1	....	1	8	....	....	....	....	....	8	8	92	144
Nebraska	....	....	....	....	....	....	....	....	....	....	....	....	2	7
New Mexico	2	....	....	1	3	....	....	....	1	1	4	7	208	199
New York	15	....	10	....	25	....	....	....	....	....	25	25	481	592
Ohio	5	1	....	3	9	....	....	....	....	....	9	10	365	398
Oklahoma	48	....	1	11	60	....	....	....	9	9	69	47	1,112	799
Pennsylvania	28	4	15	1	48	....	....	....	....	....	48	39	1,307	1,342
Tennessee	....	....	....	....	....	....	....	....	....	....	....	....	2	7
Texas	82	3	....	27	112	2	1	2	29	32	146	162	3,437	2,780
E.Tex.Bor. Co.'s	....	....	....	....	....	....	....	....	....	....	....	....	32	9
E. Texas Field	....	....	....	....	....	....	....	....	....	....	....	....	....	3
Rest of E. Texas	1	....	....	....	1	....	....	....	....	....	1	16	107	140
North Texas	22	....	....	8	30	1	....	....	10	10	41	41	782	646
W. Central Tex	3	....	....	5	8	....	....	1	5	6	14	10	228	189
West Texas	29	....	....	6	35	....	1	....	4	5	40	29	899	746
Tex. Panhandle	6	2	....	2	10	1	....	....	....	....	11	11	272	108
G. Coast, Upper	7	....	....	3	10	....	....	....	3	3	13	12	341	257
G. Coast, Lower	9	1	....	2	12	....	....	1	3	4	16	31	492	425
Southwest Texas	4	....	....	1	5	....	....	....	4	4	9	9	239	210
S. Central Tex.	1	....	....	....	1	....	....	....	....	....	1	3	45	47
West Virginia	3	18	....	2	23	1	....	....	....	....	24	13	367	435
Wyoming	1	....	....	....	1	....	....	....	....	....	1	2	64	74
Total U. S.	291	29	27	77	424	6	4	3	74	81	511	502	11,439	10,614

* Includes distillate wells. † Includes salt water disposal wells.

Nunn pool, only producing area in this western Kansas county, The Atlantic Refining Company reported an oil show at Wright 1, SE NW NW 33-21s-34w. The show, estimated at about 10 gallons a day, was had from Mississippi lime between 4725-34 feet. The wildcat is a seismograph prospect and drilling continues with the Mississippi said to be checking low.

Trego County: Continental Oil Company abandoned Strat 33, SE SE NW 25-15s-21w, wildcat 16½ miles south of the Ellis pool, after failure to recover stuck drill pipe between 3200 and 4150 feet, total depth. Tops have not been released and operator may skid to new location.

Sumner County: While The Carter Oil Company announced a new location near Latimer 1, discovery well in the southern part of the county, John Winters abandoned Butterworth 1, CWL NW NE 31-32s-3e, wildcat 2½ miles south of the Carson pool. Drill-stem test from 3735-75 feet, total depth, recovered 25 feet of mud, no oil.

Kansas oil activity fell off during the past week with only 13 oil wells good for 3900 barrels of oil daily reported compared with 17 producers rated at 6840 barrels a day listed for the previous week.

Missouri

New Madrid County: United States Bureau of Mines' Oliver 1, CSW SW 29-22n-11e, wildcat in southeastern Missouri, was shut down at 3728 feet after setting 4½-inch pipe at that depth and dismantling rotary. The test will probably resume drilling in the fall after the bureau is given an appropriation. A previous string of casing was cemented at 3090 feet to shut off water. The hole was planned originally as a test of a magnetic anomaly but was drilled as a wildcat. Contractor reported considerable trouble with circulation.

Platte County: Fell & Reid's Klam 1, SE SE SE 19-51n-33w, wildcat northeast of Parkville, still was trying to plug back and test upper formations after reaching 1750 feet, total depth. Arbuckle top was logged at 1714 feet with slight oil show reported in the formation.

Vernon County: A. W. Waymire's Stubblefield 1, NW SE SW 31-37n-32w, in southwestern Missouri, was drilling below 1810 feet.

Nebraska

Richardson County: C. M. Turner's Portrey 1, SW NE 1-3n-16e, in the south sector of the Barada pool, was abandoned at 2538 feet after drilling 15 feet into the Hunton with no oil shows. The well was reported 60 feet lower on structure than the nearby Monebia Development Company's Schwang 1, a small producer in 1-3n-16e.

☆ Arkansas

Three Wells Completed, And 3 Wildcats Staked

Activity levels off in Arkansas with 3 completions; 3 wildcat and 2 field locations staked and a number of wells testing.

Benton County: Vincent Trabucco's Charles Henderson 1, NE SE 29-19-31 is a wildcat location.

Boone County: William S. King's B. S. Lee 1, a wildcat, 24-18-22, has made surface hole.

Columbia County: Stephens field gained an oil producer, G. H. Vaughn's J. F. Smart D-4, 12-15-20w, taken to 3015 feet. Having been acidized with 2000 gallons, it pumped 65 barrels of 31.5-gravity oil from open hole. R. H. Crowe Trustee's E. C. Smart 4-A, 12-15-20, was perforated between 3914-20 feet with 24 shots, recovering 100 percent salt water. Operator plans to squeeze.

Tide Water Associated Oil Company-Seaboard Oil Company's J. S. O'Bier and Goldston 1, 18-18-19, has finally completed roads and is waiting on rig. G. H. Vaug'in, Jr., gave the county its new stake with his G. C. Buck 4, located in C SW NE NW 12-15-20.

The J. F. Smart 1, C NE SE NE 13-15-20w, changed ownership from E. H. Swearingen to E. J. Craig, Jr. A 5½-inch string was set at 3988 feet. The well is waiting for cement.

In the Haynesville field, Midstates Oil Corporation's G. W. Taylor Estate 1, tested oil and salt water, was squeezed; then 118 shots were used to perforate between 5460-73 feet. Preparations were being made to acidize.

The wildcat C. B. Couch 1 of McAlester Fuel Oil Company, C NW SW 11-16-20w, was acidized with 6000 gallons and swabbed acid and salt water. No oil showing recorded; plans are to squeeze off.

Desha County: At 114 feet 10¾-inch casing was set at W. S. Goodman's S. A. Banks Estate 1, NW SE 32-9-4w and the well is drilling past 2215 feet.

Miller County: The Carter Oil Company is testing E. R. Strohacker 2, NW SW SW 31-16-26, after drilling out cement to 3654 feet. Twenty-four shots were used between 3616-21 feet. Barnsdall Oil Company and Sohio Petroleum Company staked a wildcat, W. S. Nichols et al 1, C NE NW 20-18-28w.

Nevada County: Berry Asphalt Company has completed Fee 3, C SE SE NE 5-14-20 in the Troy field. It is pumping 10 barrels of oil and 15 of salt water in a 24-hour period.

Ouchita County: Sohio's S. R. Block 1, a wildcat, C NW NE SW 20-14-16, on a 30-minute drill-stem test from perforations made between 2132-60 feet recovered 90 feet of salt water and 180 feet of drilling mud. Drilling operations were resumed and the well was drilling shale at 2355 feet.

Sebastian County: Vincent R. Trabucco's E. M. and Berta Tucker 1, C N½ NW SW 36-5-31, is a wildcat just staked.

Union County: H. E. Wasson is to drill Union Saw Mill 1, C SW SE SE 11-18-14w, in the Hillsboro field. Meanwhile, the Strong field chalked up a failure when Root Petroleum Company declared Union Saw Mill 2, C SW¼ NW¼ 27-18-12, as dry, and abandoned it at 6379 feet.

In the Smackover field, R. L. Milam's J. T. Murphy 3, C SW SW SE 8-15-15, was perforated and being tested. The well has been bottomed at 2711 feet.

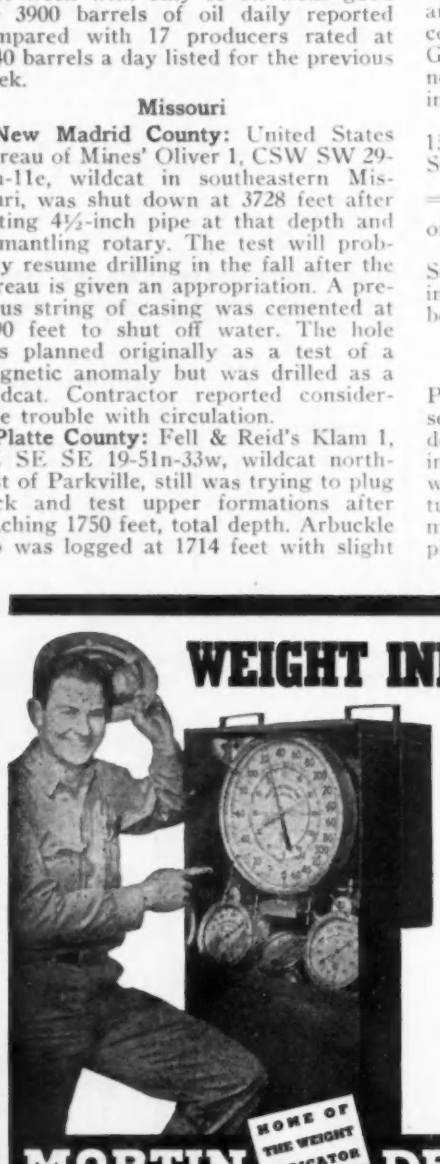
Lion Oil Refining Company, drilling at 810 feet, is making a try for production from the Smackover zone at the Dumas 1, 9-17-16, in the Lisbon field.

Geologists Elect

New officers of the Shreveport, Louisiana, Geological Society include T. H. Philpott, The Carter Oil Company, president; Van D. Robinson, The Atlantic Refining Company, vice president; and W. E. Wallace, Sohio Corporation, secretary-treasurer. During the summer when no meetings will be held the society will busy itself completing "The Important Oil and Gas Fields in North Louisiana, South Arkansas, Mississippi, and Alabama," which will be issued about August 1.

Drilling Contractors to Hold October Convention

The American Association of Oilwell Drilling Contractors has set the date of its fifth annual meeting for October 1 and 2, to be held at the Skirvin Hotel, Oklahoma City, Oklahoma.



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☆ Mississippi

Adams County Prospect Has Showings of Oil and Gas

Adams County prospect has encouraging shows of oil and gas; two successful completions for Eucutta field; Covington County prospect abandoned; British American Oil Producing Company resumes drilling in old Cary field.

Adams County: Charles H. Osmond's Armstrong Ellislie 1, NEc 31-5n-2w, 20 miles south of the Cranfield field has tested both gas and oil from the Wilcox horizon, between 4000 and 5000 feet, and production possibilities are good. Wells in the Cranfield field have tested good shows of oil from the Wilcox strata, although it is the only field in the state where that section has shown good prospects.

Outside of the Humble Oil & Refining Company's M. R. Smith 1, in Jefferson County, the Armstrong-Ellislie 1, is the only wildcat located in an entirely new area which has had good prospects in many weeks. In the Cranfield pool The California Company's M. T. Hickingbotham 2, 66-7n-1w, continues to test after well flowed 100 barrels of oil and 86 barrels of salt water in 24 hours through a 3/16-inch choke from perforations at 10,408-34 feet opposite the Massive sand. Considerable salt water has been encountered on drill-stem tests. The California Company's two Ella G. Lees 5 is drilling below 8700 feet in chalk and the Lees 6 is in sand below 9600 feet.

Wayne County: Magnolia Petroleum Company's W. W. Reynolds 1, NW NW SE 18-9n-8w, in the Eucutta field, has an initial production of 240 barrels of 18-gravity oil per day. The well was perforated opposite the Eutaw zone and swabbed in. Sun Oil Company's Mrs. Adie Finley 2, SEc SE SW 7-9n-8w, in Eucutta perforated three sections of the Eutaw 5100 feet and 2½-inch tubing run to 5040 feet. Initial production was 201 barrels of oil in 19 hours. Gulf Refining Company's Masonite Corp. "D" 1, NEc SW NE 35-10n-9w in the Eucutta pool is preparing to complete after perforating at 5014-37 and 5083-5124 feet and swabbing for seven hours. Fluid is standing 2000 feet from the top. Gulf's G. S. Stanley 25, NEc SE 3-9n-9w in Eucutta field tested 225 feet of good gravity oil and some mud from perforations at 5294-99 feet opposite the Eutaw horizon.

Claiborne County: The Pure Oil Company's A. L. Chapman 1, 13-11n-3e, 10,500-foot test is coring below 9970 feet with no shows reported. Sun Oil Co.'s B. D. Segrest 1, C SE NE 7-10n-5e is drilling below 2960 feet in shale and sand.

Clarke County: Louis Rousel's Long Bell Lumber Co. 3, C NW NW 14-2n-16e is drilling below 4205 feet with several slight shows of oil. The well was perforated in three sections of the Eutaw horizon below 3700 feet and swabbed heavy black oil and salt water. Perforations were squeezed and well was reperforated at 3756-64 feet with 16 shots after which tubing and rods were run. Well is testing on pump.

Covington County: Cities Service Oil Co's Rubin Altman 1, NEc NW 22-7n-

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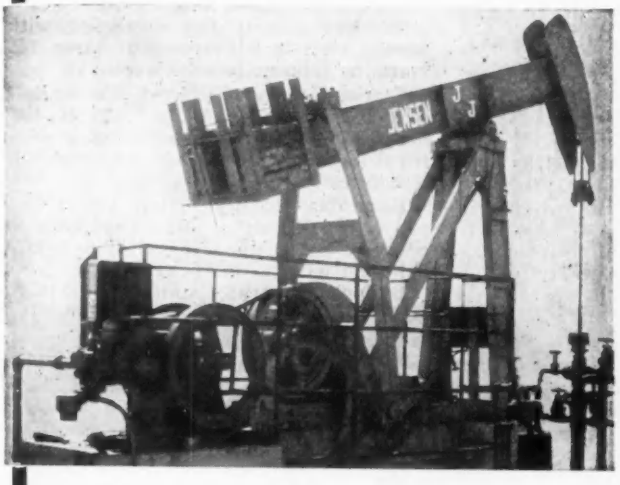

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16w has been abandoned at 9700 feet in the Massive sand.

Jefferson County: Humble Oil & Refining Co's M. R. Smith 1, SEc 12-9n-1e wildcat is drilling below 10,480 feet. Well has been tested continually below the productive horizon. Gulf Refining Company's Ella M. Cato 2, NWc NE 30-8n-4e, at 5251 feet, is being held up by lost section of drill stem.

Jasper County: Gulf Refining Company's R. C. Gregory 1, SEc NE SW 9-10n-12w is coring below 6573 feet. Latest cores taken at 6504-43 feet recovered only sandy shale. Eutaw horizon was reported to be topped at 6296 feet. Angle & Angle have established location for their wildcat George McCollum 1, C NW SW NW 15-2n-10e.

☆ Alabama

State's Wildcat Activity Decreases During Week

Wildcat activity has decreased with several tests in Alabama shut down. No starts or failures for the week.

Clarke County: California Company's Scotch Lumber Company 1, 25-10n-1w, has resumed drilling after running electrical log, and has reached a total depth of 840 feet.

Escambia County: Hunt Oil Company's T. R. Miller Mill Company 3, SW SW SW 32-3n-11e, is drilling below 4310 feet with no shows reported.

Bullock County: Capitol Oil & Gas Company's Fred Pickett 1, NEc SE NW 22-13n-21e, is drilling below 2350 feet without shows.

T. M. Lendon's J. L. Harris 1, C SE SW 12-12n-22e, is drilling below 1730 feet.

Sumter County: J. H. Gwin's Allison Lumber Company 1, C SE SW 36-19n-4w, is drilling at 307 feet.

Washington County: Wayne Refining Company's Willie Mitchell 1, NW NE 12-8n-3w, is still fishing for tools at total depth of 4432 feet.

Florida

Humble Oil & Refining Company has put Gulf Coast Realties 4, 20-48s-30e, second producer in the Sunniland field, on the pump and is still pumping wash water. Total depth of well is 11,597 feet in lime. Humble's Gulf Coast Realties 7, same field, is rigging up.

Charlotte County: Humble's Lowes-Treadwell 1-A, C SW NE 17-42s-23e, is drilling below 2820 feet in dolomite.

Highlands County: Humble's G. C. Carleton Estate 1, C SW NE 34-38s-29e, is drilling below 9251 feet in lime and anhydrite. Cores have picked up oil stains but porosity has been unfavorable, and no shows have indicated commercial possibilities.

Monroe County: O. D. Robinson's State 1, 29-59s-40e, is drilling below 6060 feet, without shows so far.

Gulf County: The Pure Oil Company abandoned St. Joe Paper Company 1, wildcat in 10-7s-9w, at 5796 feet without logging any shows of oil.

☆ California

Del Valle Field Gets New Oil Producing Zone

New producing zone discovered in Del Valle field with discovery well flowing at rate of 1900 barrels daily on formation test; outpost producer in Premier-Poso district proves up additional locations; formation test made of Eocene showings in Lost Hills wildcat; discovery well of Coalinga Nose Eocene pool to be deepened.

Los Angeles County: Ohio Oil Company has discovered a new sand between the Sepulveda and Vasquez-Videgain pools in the Del Valle field. Company's Vasquez 13, a development well in 17-4n-17w flowed on a formation test at a 1900-barrel-per-day rate of 35.3 gravity oil, cutting 1.4 percent, through perforations from 5565 to 5570 feet and 5625 and 5630 feet. Flow pressure was 325 pounds. Bottom of the hole is 6050 feet with 7-inch cemented at 6049. It is understood that the company will complete the well in the Vasquez-Videgain zone to conform to the development pattern for this zone, and drill a new well to the newly-discovered sand.

Also of interest to Del Valle operators was the report that Superior Oil Company and British-American Oil Producing Company are planning a joint deep test in 18-4n-17w.

In the Leffingwell area near Santa Fe Springs, Standard Oil Company of California's Lewis 1 has reached 9100 feet and is coring shale thinly streaked with oil sand. Standard's Ward 3-1, 27-3n-16w, which seeks to extend the Aliso

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Canyon field to the north, has hung tubing at 9759 feet with packer at 9665 and is swabbing for a production test. Total depth of the well is 10,363, plugged to 10,185 feet.

Seaboard Oil Company's L. A. Brick 1, wildcat near downtown Los Angeles, is coring below 2350 feet.

Kern County: Five wildcat projects were abandoned as dry, but two new tests got under way. One is Tide Water Associated Oil Company's Olcese 1, 21-28-29, east of the Round Mountain field, the other Williams Bros. Oil Company's Layman 1, 12-28s-19e, in the Antelope Hills area.

Independent Exploration Company proved up an additional 8 or 10 locations in the west half of 33-27-27, Premier-Poso Creek district, when it completed its Conoco 33-104 for 235 barrels per day of 12.5 gravity oil. The new producer, drilled on ground leased from Continental Oil Company, was an outpost location.

Superior Oil Company continues to run production tests on its two new wells in the Paloma field. On an 18-hour flow test its Anderson 38-35 in 35-31-26 flowed at the rate of 1350 barrels per day of 35-gravity oil through a 30/64-inch bean. Superior continues to gun-perforate and test Houchin 74-34. The sand is very tight and the operator is having difficulty in bringing the well to completion.

Attempts to make a Paloma zone producer of Western Gulf's L.A.A.C. 67-6 in 6-32-27 have been unsuccessful and the operator is attempting to complete the well in the Symons zone.

Standard of California cored gray sand showing some oil stains between 10,390 and 10,450 feet in its Lost Hills Eocene test, Calin 58-4. Operator is making formation tests of the interval.

Richfield Oil Corporation's wildcat K.C.L.-Stine Canal B-1 in 21-30s-27e, is reported to have recovered 71 stands of oily, gassy mud from the Stevens sand in a formation test of the interval 6656-6677 feet on a one-hour test.

Fresno County: Robert S. Lytle, Operator, is deepening the East Coalinga Eocene pool discovery well, Gatchell 2, in order to take in more of the producing zone. Old depth is 6908 feet.

In the Cantua Creek area, Tide Water Associated has set an 8⅝-inch protection string at 8855 feet in its wildcat S. P. 82-15, 15-17-15. This well has been drilled to 10,073 feet.

Orange County: Two wells were completed in the Costa Mesa district. Barnhart-Morrow Consolidated's Deeble 2 in 18-6s-10w was good for an initial of 105 barrels daily of 18 gravity oil on the pump, 10 percent cut. Delaney-Root & McNulty completed Karales 4 in 19-6s-10w for about 125 barrels per day, with prepacked liner landed at 2090.

Butane-Driven Rotary Rig Set Up for Oregon Test

The Texas Company has installed butane-driven rotary equipment for its Clatskanie, Oregon, wildcat and will begin drilling within a few days. The test well is located near the southeast corner of the west half of the northeast quarter section of 36-7n-4w. Drilling foreman will be L. B. Tomlinson, who has been with the company 26 years.

☆ Rocky Mountain Area

Liberty County, Montana, Gets Third Texaco Test

East Utopia area in Liberty County, Montana, to get third test by The Texas Company; Kevin-Sunburst field extension fails to measure up to discovery; Continental to test gas sands in South Elk Basin, Wyoming.

East Utopia: The Texas Company is preparing to move in for its third exploratory well in the East Utopia District, Liberty County, Montana, in its Nick Laas 2, NW NE SW 14-33n-4e, in the north central part of the Sweetgrass Arch, 25 miles east of Kevin-Sunburst field. It has a block of 41,000 acres upon which the first well was drilled in 1943 in Section 16-33n-4e. It had the top of the Madison at 2578 feet and drilled 1 foot into the pay. On initial pump test it made 61 barrels of fluid, 28 percent water, first 20 hours. On later tests it made 20 barrels per day of oil.

The next well, Nick Laas 1, was drilled in Section 14, a mile to the east. It was completed last fall at 2610 feet, total depth, for 3 million cubic feet of gas per day through perforations at 2346½-2349 feet. Gas in upper horizons cased off was estimated at 25 million cubic feet per day. The third well is located nearly one-half mile northeast of the gasser.

Kevin-Sunburst Extension: Consolidated Gas Company's Barkulo 2, SE NE SE 15-35n-4w, 990 feet east of Barkulo

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1, which last month opened a new pool 2 miles west of the nearest production in the Kevin-Sunburst field, Montana, failed to measure up to the discovery. It was drilled to 2330 feet, had the Ellis at 2157 feet and the Yellow sand at 2307 feet. Fluid, mostly oil, rose 350 feet in the hole, but no test has yet been made. It ran 22 feet lower than the discovery, which made 120 barrels of oil per day.

South Elk Basin: Continental Oil Company has started a test on South Elk Basin, Park County, Wyoming, to go to the gas sands which were passed up in its Ida Goodstein 1, the Tensleep discovery well. The location is Ida Goodstein 3, SW NE SW 20-57n-99w. It is a northwest offset to the discovery well in the Tensleep, which is still testing and is not yet listed as a completion.

☆ North Louisiana

Sixteen Completions, 19 New Stakes for the Week

Sixteen completions; nineteen new stakes and a number of wells testing brighten outlook of oil in North Louisiana.

Bossier Parish: Barnsdall Oil Company is scheduled to drill an outpost to their Hanks well with the staking of Padgett-Bundy 1, C NW¼ SE¼ 17-20-12w. This will make the fourth well staked in the new Benton field.

Following testing at Ellerbe 1 by Vaughn and Hurley the well was finaled with initial production of 300,000 cubic feet of gas, 20 barrels of distillate, and 8 barrels of salt water on a ¼-inch choke.

In the Bellevue field, Princeton Refining Company completed Arkansas Fuel 30-A flowing 6 barrels of oil per day from a total depth of 405 feet. The company also completed the 20-A flowing at the same rate; however, this well was taken to 402 feet.

Barnsdall Oil Company and Sohio Petroleum Corporation's Welori Lumber Company 1 swabbed salt water and some gas at 8525 and 8530 feet before being plugged back at 8515 feet to test around 8460 feet in the Davis sand, which drill-stem tests indicated as tight. Production possibilities in the Bodcaw and "D" sands, productive in the discovery well, the Hanks, had previously been reported as slight.

Bienville Parish: Ohio Oil Company's L. L. Brinkley 1, S&W NEc 6-16-7w, is the first well to be staked as an outpost to the company's discovery, Woodard-Walker 1.

Placid's Nebo Oil B-2, 24-15-7w, was preparing to set pipe at 8900 feet. In the Lucky field, a new well was scheduled to be drilled by Penrod Drilling Company, L. E. Rowell 1, C SW NE 2-15-7w.

Caddo Parish: Phillips Petroleum Company added a new test in the Longwood area near their discovery, Moneyham 1. It is Jodie 1, N&E of SWc NE¼ 32-19-16w. This company recently completed Leake 1, which flowed 156 barrels of oil per day and 500,000 cubic feet of gas on ¼-inch choke, tubing pressure 400-450 pounds.

In the Caddo field, Joe Mucher plugged and abandoned S. L. Herold 1, following a failure on drill-stem test. The well was bottomed at 2390 feet. In the Pine Island field, Hart and McFarland's permit to drill Stiles A-2 expired.

Lion Oil Refining Company, which is deepening an old well in the Rodessa field to find a new producing horizon, cored between 6686-6701 feet in J. M. Wynn 6 and recovered 10 feet of sand with good showing of oil and gas and 10 feet of shale. The well is coring ahead.

Claiborne Parish: Big West Drilling Company tested 3 million cubic feet of gas on ¼-inch at C. B. Tanner B-1, having perforated at 5123-30 feet with 42 shots. The company is preparing for a potential test at 7845 feet at A. N. Alford 1, scheduled for dual completion.

White and Hinton are rigging up at their Cotton Valley test. R. P. Bond 2, 15-23-8w, in the Haynesville field. Skelly Oil Company renewed permit at the King Dance Unit 1, 31-20-6, in the Athens field, and at last report was rigging up for work.

F. A. Callery's wildcat, Sallie Williamson 1, C SE SE NE 28-22-7, was declared dry and abandoned at 6255 feet.

Concordia Parish: In the Lake St. John field two new stakes were made and one well is testing.

Carter Oil staked Collier Murray 1, 32-9-10e. The company's other Tuscaloosa test is Hall W. Wilson 1, 29-9-10e, which is rigging up.

The California Company's L. R. Alwood et al 1, 11-9-10, having set 7-inch casing is testing. Total depth is 10,430 feet.

De Soto Parish: J. P. Owen's will drill

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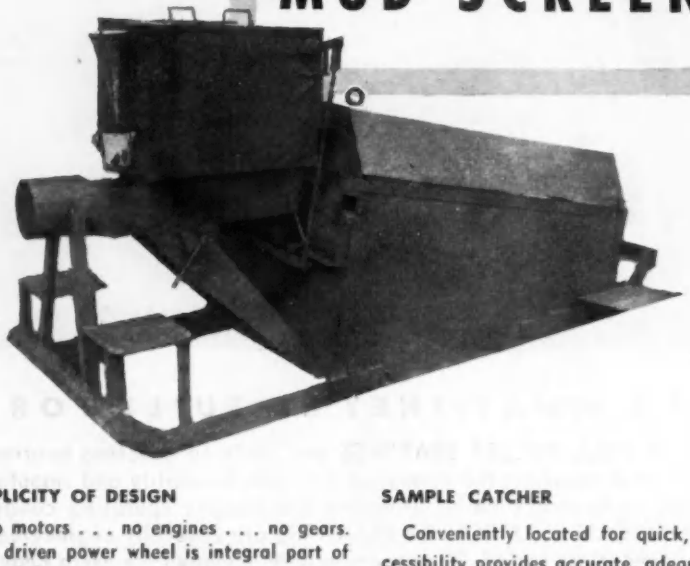

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C. M. Thompkies Estate J-1, SE NE¼ SW¼ 27-14-13, to 2800 feet.

Grant Parish: The wildcat of George W. Woodard, Jack Thompson 1, was abandoned at 1800 feet.

Rapides Parish: Louisiana Land and Exploration Company will drill J. A. Bentley Trust 2 1-C in the Flatwood field, C NW NE 25-4-5, a Wilcox test.

Richland Parish: C. H. Murphy-Sun Oil Company finaled J. E. Holt 8, flowing 211 barrels of 41.9-gravity oil on a 3/16-inch choke from perforations at 3366-71 feet, total depth, 3497 feet, gas-oil ratio, 573/1. The company's Ina Mae McEachern 2 was abandoned at 3533 feet, while its George K. Anding 1, flowed 198 barrels of 41.8-gravity oil on a 3/16-inch choke. Perforations were made at 3358-64 feet, total depth, 3378 feet. Another well which this company completed was J. E. Holt 5, which flowed 260 barrels of oil on a 3/16-inch choke. The company also staked a new test, J. E. Holt 6, 21-17-9e.

H. L. Woods is to drill Munholland 1, SEc NE¼ 20-17-9e, in the Delhi field.

Two wildcats staked for this parish were Humphrey and Wynne's M. M. Valentine 1, C S½ SW NE 12-15-6e, and Southport Petroleum Company's Lola S. Howard 1, C NW NW NW 4-16-8e.

Sabine Parish: North American Consolidated Company plugged and abandoned below 5500 feet Whitney Corporation 1, C SW SW NE 5-9-13.

Union Parish: Interstate Natural Gas Company completed 2 wells and staked an additional 2. Fee 174 had a gas volume of 1,338,000 cubic feet, while Fee 173 had 546,000 feet. The two new wells are Fee 177, N&W SEc 28-21-3e, and Fee 178, 1320 N&E SWc 27-21-3e. Southern Carbon Company's Grayling 48, NWc 19-22-4e, was added to the gas field operations.

Webster Parish: Hunt Oil Company is trying to complete a discovery in the parish at Mrs. O. G. Roberts 1, SE NW 11-23-10w. The well is flowing at the rate of 92 barrels of oil per day on a ¼-inch choke. This well was originally drilled to 11,300 feet and plugged back to test upper levels with perforations and squeeze jobs around 5734-44 feet before the discovery was announced.

☆ South Louisiana

Superior Leases Large Tract in Iberia Parish

Mineral board grants large Marsh Island Game Preserve lease in Iberia Parish to Superior Oil Company; Arcadia Parish announces completion; storage tanks being erected in St. Landry Parish.

The granting of a mineral lease on 75,000 acres of the Marsh Island Game Preserve in Iberia Parish to Superior Oil Company for $503,000 in cash, $251,500 yearly rental and straight royalty of 20 percent on oil and gas plus 1/20 overriding royalty up to $5 million has been announced by Louisiana's Mineral Board.

The large tract was one of 12 let to high bidders whose offers totaled approximately $647,000 in cash and more than $300,000 in annual rentals and royalties.

Among other grants made by the board was a 1700-acre tract of school

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land on the same island which went to Amerada Petroleum Corporation for a bonus of $20,612, annual rental of $10,306 and ⅛ royalty, plus 1-48 royalty to $100,000.

Meantime, oil drilling activity in South Louisiana was confined to routine field work during the week.

Acadia Parish: Nicklos, Vincent & Welch have completed their Acadia Parish Schol Board 2-B in the Ritchie area for 117 barrels of 24.9-gravity oil daily through a 5/32-inch choke from perforations at 3502-12 feet.

Plaquemines Parish: Phillips Petroleum Company's LLE-Fee 10, in the Bastian Bay field, is setting 5½-inch casing with total depth of 9997 feet for completion.

Tide Water Associated Oil Company is testing in a higher sand in its 19 Manhattan, in the Venice field. Drilled to 10,500 feet, 7-inch casing was set at 8984 feet. Perforations at 8800-10 feet showed some gas and operator squeezed and will retest at 8672-86 feet.

St. Charles Parish: The Pure Oil Company's GATX 4, deep test in the Good Hope area, is drilling below 10,840 feet in shale on an 11,000-foot contract.

St. Landry Parish: Sun Oil Company and The Atlantic Refining Company's W. W. Guidry 1, in the Cankton pool, is erecting storage tanks for completion after setting 7-inch casing. Total depth is 10,505 feet.

LaFourche Parish: Sun Oil Company is completing another oiler in the Chacahoula field. The company's Dibert, Stark & Brown 27 perforated casing at 7625-40 feet and flowed 44 barrels of oil, 5 percent water, in 12 hours through a ⅛-inch casing. Tubing pressure was 2400 pounds.

☆ Upper Texas Coast

Prospective Pool Opener Seen for Harris County

Protection casing set in prospective pool opener on southwest flank of Hockley dome; wildcat well northeast of Katy makes final completion; dual sand completion in Livingston field.

Harris County: Magnolia Petroleum Company's Warren Ranch 2, wildcat test on the southwest flank of the old Hockley salt dome, has landed 7-inch protection string at 6356 feet and is preparing to drill deeper. On a drill-stem test at 5684-5731 feet, this important flank test recovered 2400 feet of 36-gravity oil.

Josey-Bruton's David Rorick, Jr., 1, wildcat discovery well 6 miles northeast of Katy, has made final completion through perforations at 7044½-54½ feet. On a 24-hour gauge the well flowed 87 barrels of 55.5-gravity distillate plus 5,874,000 cubic feet of gas through a ⅜-inch choke. Tubing pressure was 1887 pounds and casing pressure 2157 pounds. The gas-oil ratio was 67,425 to 1.

Trinity County: Magnolia Petroleum Company's Bolton 2, Woodbine sand wildcat test 3 miles west of Glendale and southwest of Navarro Oil Company's 1 Bolton, has spudded and set surface casing at 652 feet. The Magnolia well is projected to 11,000 feet to test the Woodbine which was found in the Navarro well.

Polk County: Jordan Drilling Company has made a dual sand completion at its Sodak Oil Company 1 in the Livingston field. On perforations at 6380-6540 feet, the well gauged 506 barrels of 36-gravity oil daily through a ¼-inch choke with a casing pressure of 725 pounds. At 6632-76 feet, the well gauged 455 barrels of 36-gravity oil daily through a ¼-inch choke with a tubing pressure of 665 pounds.

Austin County: Location for a 9000-foot wildcat test has been staked by the Union Producing Company 3 miles west of the Sealy townsite. It is the John E. Hintz 1-A in the H&TC survey.

Fort Bend County: The Fulshear area once more will be given a deep wildcat test. The Texas Company has staked its Mason Briscoe 1 in the John Foster survey. Projected depth is 9000 feet.

Brazoria County: Phillips Petroleum Company has made completion at its Benson-Smiley 1 in the Chocolate Bayou field. The well gauged 177 barrels of oil daily through a 14/64-inch choke, along with 3,379,000 cubic feet of gas from perforations at 9845-55 feet.

Also at Chocolate Bayou, Phillips' Houston Farms B-1 was abandoned at 12,295 feet.

☆ Lower Texas Coast

Bee County Gets a New Gas Distillate Field

Gas-distillate field opened in Bee County; deep Willacy County wildcat continues testing; Live Oak County wildcat well cleaning into pits as gas-distillate well; new producing area opened near Kittie.

Bee County: Final completion has been made on Navarro Oil Company's Forest A. Dahl 1, wildcat 3½ miles northwest of Pettus. On a potential test the well flowed 2,110,000 cubic feet of gas per day along with 2 barrels of condensate an hour through a 3/16-inch choke. Drilled to 7012 feet, 5½-inch casing was set at 6780 feet with 5-inch liner set to 6995 feet. Operator perforated the liner at 6985-93 feet.

Willacy County: Magnolia Petroleum Company and J. S. Abercrombie Company's N. H. Dohe 1, deep wildcat in the La Sal Vieja area, 3 miles southwest of Raymondville, continues to test around 10,100 feet but all information on the tests is being withheld. Meantime, interest in the area was boosted with the spudding of Magnolia and Abercrombie's Geis 1, located about 1 mile north of the Dohe 1. Also about 1¼ miles south of the Dohe 1, Standard Oil Company of Kansas has staked its E. A. Mann 1.

Live Oak County: Wright Drilling Company's Mrs. M. A. Hinnant, wildcat 9 miles southeast of George West, is testing through a 5/64-inch choke after perforating at 5880-86 feet. Previously, a 23-minute drill-stem test through the same perforations developed 1300 pounds working pressure and recovered 90 feet of distillate.

Continental Oil Company has opened another gas-distillate pool in this area, the company's Albert West 2-A, 1½ miles southeast of Kittie, tested gas and distillate through perforations at 6696-6704 feet and now is testing in a deeper sand at 6719-25 feet. Total depth is 7386 feet.

Jackson County: Testing operations are under way at Moore & Ahern's A. Michalek, Sr., 1, wildcat test 4 miles north of Vanderbilt. Drilled to 7034 feet, operators set 5½-inch casing at 4924 feet and will perforate at 4862-65 feet for completion attempt.

Calhoun County: Location for an 8000-foot wildcat test has been staked by Quintana Petroleum Corporation 5 miles northwest of Port Lavaca. It is the John M. Boyd 1 in the B. Rodriguez survey.

Goliad County: Rowan & Hope are moving in material to drill a 5500-foot wildcat test in the J. L. Skelly survey. It is the Ryalls 1 on a Magnolia Petroleum Company farmout.

Oklahoma Oil Scouts Hold Meet at Sulphur

Thirty-five members attended the Oklahoma Oil Scouts Association's informal meeting at Sulphur, Oklahoma, June 15 when various scouting problems were discussed. Special guests included M. A. Hoffman, Cities Service Company, Oklahoma City; Bob Sutton, British-American, of Oklahoma City; and Don Shoemaker, chief scout, Skelly Oil Company, Tulsa.

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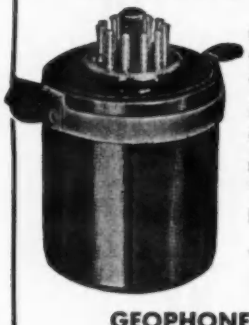

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☆ Southwest Texas

Shallow Gas Production Opened in Starr County

Shallow gas production opened north of Rio Grande City; Duval County wildcat shows gas and distillate; deep test is staked in McMullen County; wildcat tests in Webb and Jim Hogg counties abandoned.

Starr County: Shallow gas production has been opened 6 miles north of Rio Grande City at Panal Oil Company's Lillie May Baird 1, Porcion 82. Drilled to 1713 feet, operator set 5½-inch casing at 1526 feet and perforated at 1134-44 feet. On open flow the well gauged 4,800,000 cubic feet of gas daily.

In the Garcia field, Sun Oil Company's Coates 1-B flowed 1,800,000 cubic feet of gas daily through a ¼-inch choke from perforations at 3622-35 feet.

Also at Garcia, Coastal Refineries, Inc. Irene Vela 1 has been completed through perforations at 3290-3300 feet for 22,000,000 cubic feet of gas daily, open flow.

Duval County: Santa Clara Oil Company's Clara Driscoll 3, wildcat 13 miles northwest of Benavides, perforated casing at 3160-66 feet and flowed gas with a spray of oil through a ⅛-inch choke. On open flow, the well is estimated good for 10 million cubic feet of gas daily. The well now is shut in.

McMullen County: Location for a 6500-foot wildcat test has been spotted 12 miles west of Whitsett by Santa Clara Oil Company. It is the Volney M. Brown 1 in the R. H. Brown survey.

Webb County: The Texas Company's W. R. Nicholson 1, deep wildcat test 23 miles west of Freer, has been abandoned at 7014 feet.

Jim Hogg County: Bridwell Oil Company's first attempt to open production 12 miles southwest of Hebbronville failed with the abandonment of its Isabel R. de Gutierrez 1 at 4012 feet. A second test may be drilled in the area.

☆ South Central Texas

Tests in Kimble and Kerr Counties Holding Interest

Deep test at Gas Ridge resumes operations; Poth field well is retesting; Guadalupe County wildcat is abandoned; Kerr and Kimble County wells hold interest.

Bexar County: H. A. Pagenkopf's Max Blum 1, scheduled deep test in Gas Ridge field, has resumed drilling operations at 1360 feet after shutting down to clear titles.

Kerr County: Phillips Petroleum Company's N. H. Whitworth 1, Ellenburger wildcat test southwest of Kerrville, is near contract depth of 5500 feet. Operator has 7-inch casing set at 5045 feet.

Kimble County: Texas & Pacific Coal Oil Company's Murr 1, Ordovician wildcat, topped the Ellenburger at 3840 feet and is drilling below 4560 feet.

Wilson County: Crudoil Drilling & Exploration Company's Frank Gorzelle, in the Poth field, is preparing to retest after recovering water on initial completion attempt at 4034-36 feet.

Quintana Petroleum Company's Annia L. Moore 1-A, wildcat test 4 miles southwest of Dewville, was drilling near 6500 feet in sand and shale.

Guadalupe County: Wiegand Brothers Drilling Company's B. R. Ussery 1, wildcat test 3 miles northwest of Kingsbury, is abandoned at 2485 feet.

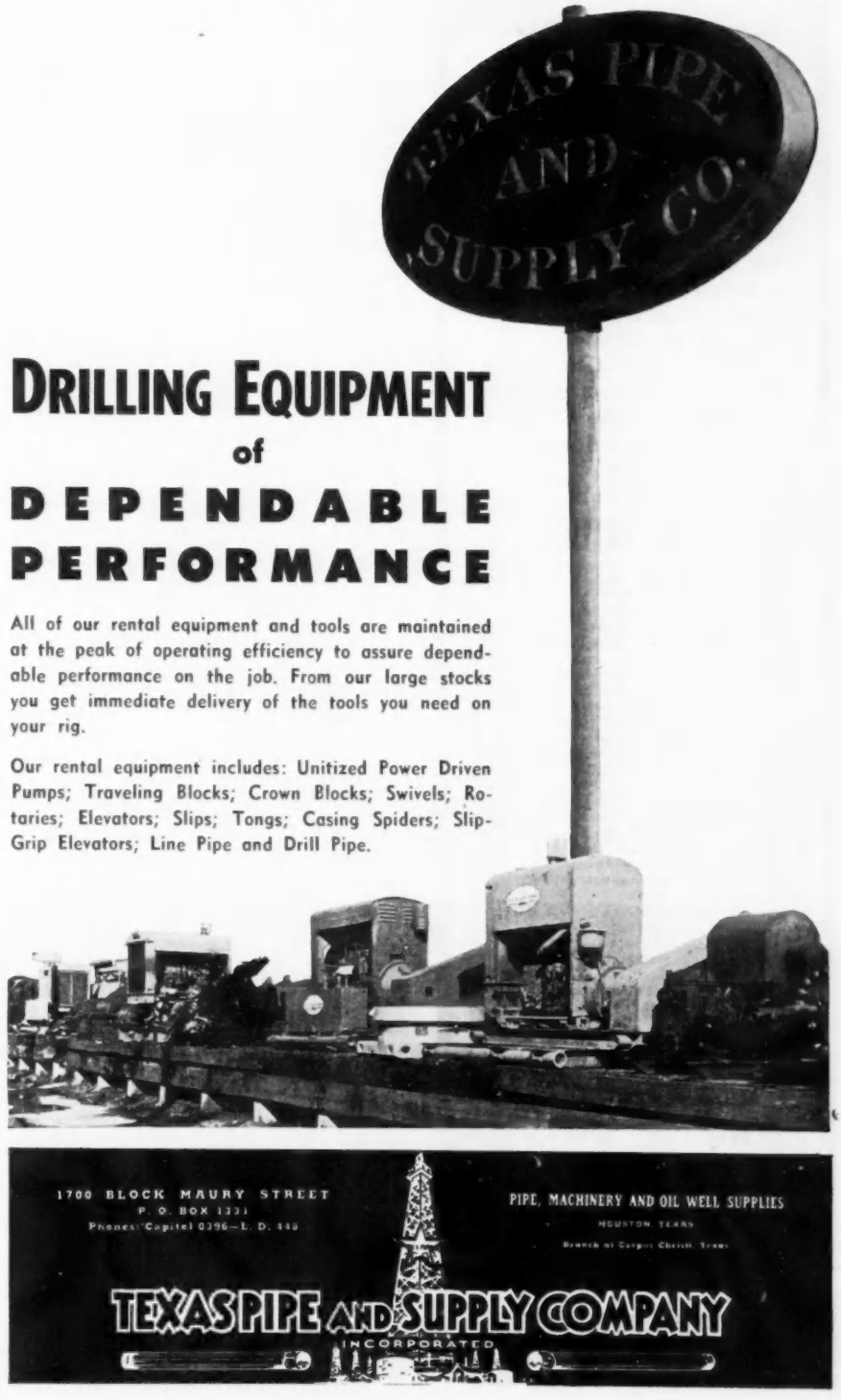
Philippines, East Indies Work

Grant W. Corby, speaking recently before the Pacific Section, AAPG, outlined the general geology of the Philippine Islands and the Netherlands East Indies, stating that four geologic provinces in the East Indies can be traced belt fashion across the Philippines. The belt which produces oil on Sumatra, Java and Borneo crosses Cebu, Mindanao and Luzon and a test that was being drilled on the northern tip of Cebu was interrupted by the Jap invasion.

Robert M. Kleinpell at the same meeting told of his work in the Philippines. After a year of discouraging micropaleontological effort to establish a columnar classification of rocks, he discovered a Baggini Kleinpelli and was able, he said, "to go to town from there." The Jap invasion and his internment followed.

Capacity Increased

Compressor capacity of the pressure-maintenance plant in the Elk Hills Naval Petroleum Reserve will be increased 1200 horsepower, the addition having been approved by WPB. Cost will approximate $150,000.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☆ West Texas

East Side of Fullerton Fails from the Devonian

Devonian production appears absent on the east side of the Fullerton field; Crane County wildcat has record thickness of Devonian pay; short southeast extension given the TXL field.

Ector County: Atlantic Refining Company's T. P. Land Trust 1-A, southeast offset to the most southerly Devonian producer in the TXL field, entered the Devonian at 7785 feet, being 27 feet high, and flowed oil through tester at 7850 feet. It will drill through the section before running pipe for completion through perforations. Shell Oil Company and Cities Service Oil Company's T. P. Land Trust 1-B, C SE NE Section 19, Block 45, scored an important southwest extension to the mid-section of the structure, with natural potential of 1988 barrels through ½-inch from perforations at 8005-90 feet. The partnership's T. P. Land Trust 1-D, southeast offset to their Devonian discovery, was due to perforate higher after testing oil and water, with the hole bottomed in chert at 8117 feet. Bottom-hole water was previously confirmed through testing tool at 8057-8117 feet. Sinclair Prairie Oil Company's Williamson 1, 2¾ miles north by west of nearest Devonian and comparatively flat in structural position, was drilling lime at 8133 feet after passing up nominal show of gas in Devonian at 7883-8029 feet.

Andrews County: Sinclair Prairie Oil Company's University 2-146, east edge of the Fullerton field and 4 miles northeast of nearest Devonian production, was drilling hard lime at 8745 feet without shows, thereby forestalling any possibility of Devonian production extending across the structure. Base of Permian was called at 8465 feet with elevation of 3273 feet. The company's Ratliff 1, 3 miles southeast of its Grisham-Hunter 1 failure in granite, was drilling lime at 6565 feet, having entered dry Glorietta at 5600 feet with elevation of 3256 feet.

Shell Oil Company and The Texas Company's Ratliff-Bedford 1, 2½ miles northwest of the granite failure, was drilling Simpson lime and shale at 10,945 feet. The Simpson is about 700 feet thick in this area. The test has 3 prospective oil zones virtually assured. Humble Oil & Refining Company's Means 88-X, Ellenburger project for the Means field, was drilling unidentified lime at 11,510 feet.

Crane County: Atlantic Refining Company's University 1-A, 5⅔ miles west of the McElroy field and contracted Ellenburger test, was using tester at 8748 feet. Latest drill-stem test resulted in heavy flow of gas with oil spray at 8650-8700 feet, while drill-pipe yielded 820 feet of oil- and gas-cut mud and 30 feet of muddy salt water. Previously reported test at 8564-8650 feet also registered oil flow and same amount of muddy salt water in drill-pipe. It is evident that it is not formation water. This wildcat now appears to have the greatest thickness of Devonian pay in the state, as it produced at intervals below 7913 feet.

Moore Bros. et al's Waddell-Southland 1, 4½ miles northeast of the McKee 3-well Ordovician pool, was drilling lime at 4260 feet, having logged oil-staining at 4212-18 and 4232-36 feet in the Clear Fork.

Tom Green County: The Texas Company's Edwards 1, Wall area and first test in the county to drill through the Ellenburger, topped at 5295 feet, was abandoned in the Cambrian salt water sand at 5955 feet.

Irion County: Shell Oil Company's Tankersley 2, 5⅔ miles southeast of the Mertzon shallow pool and ¾-mile northeast of its 8357-foot Cambrian failure, was showing oil and gas while swabbing down for test of perforations at 7195-7202 feet in Basal Strawn. Drill-stem test at 7196-7200 feet indicated production before deepening to Ellenburger, topped at 7299 feet or 8 feet high, and the well is bottomed in Cambrian sand at 8408 feet. Skelly Oil Company's Sugg 1, 6¾ miles west of the Mertzon pool and an Ellenburger test, was drilling limey-shale at 6780 feet, having logged the San Andres at 1340 feet with elevation of 2485 feet.

Winkler County: Amon G. Carter and Pure Oil Company's Walton 1-E, C NE SE PSL 2, Block B-3, southwest extension for the discovery sector of the Keystone-Ellenburger field, flowed 320 barrels of 46.4-gravity oil with gas-oil ratio of 8219/1, through 19/32-inch choke. Production is from perforations at 9569-9635 feet and open hole at 9635-9688 feet in Ellenburger, topped at 8930 feet. Excessive gas-oil ratio penalizes the allowable to 97 barrels daily, as compared to a flat allowable of 400 barrels daily earned by the other 27 deep wells. Walton 1-E tested distillate with high gas-oil ratio at 9635-9910 feet, muddy water without show in granite-wash material at 9918-58 feet. The partnership's Walton 8-E, ¼-mile south and highest Ellenburger top, is showing for a distillate well with excessive gas volume. Gulf's Keystone 61-E, ¼-mile east of the south end of the Ellenburger producing area, rated at 5,680,000 feet of gas daily with flow of 37-gravity oil through tester from Devonian at 7265-7440 feet. Commercial production from the Devonian and Silurian is assured for this sector.

Presidio County: Stanolind Oil & Gas Company's Presidio Trust 1, projected 7500-foot Pennsylvanian test and 14 miles southwest of Valentine, was drilling anhydrite and lime at 3380 feet. The company is also contributing towards the deepening of the Presidio Oil Company's Conring 1, which is credited with having entered the Eagleford shale at 3890 feet, with elevation of 4497 feet. The latter was drilling lime at 4130 feet. This sparsely explored territory is beginning to attract other operators as a precaution against surprise developments.

Floyd County: Geo. P. Livermore, Inc.'s Alexander 1, J. C. Cooper survey, was drilling lime and anhydrite at 3190 feet, having entered the San Andres at 2420 feet with elevation of 3106 feet.

Asks Salt Water Injection In Garber, Oklahoma, Pool

Cities Service Oil Company which opened the New Garber pool of Garfield County, Oklahoma, early this year, seeks authority from the Oklahoma Corporation Commission to utilize a dry hole near the discovery well as a salt water injection well.

The discovery was hailed as an important new find but subsequent drilling proved disappointing.

☆ Texas Panhandle

Jack County Completion Try in Ellenburger Seen

Jack County wildcat will make completion try in Ellenburger; Sivells Bend field outpost adds another prospective oil zone; west extension pending on Clay County Deep Bend area.

Jack County: Continental Oil Company and Sinclair Prairie Oil Company's Cherryhomes 1, John Irvin survey and 1½ miles north of Cudiff, was slated to set pipe after recovering 180 feet of slightly oil-cut mud and 3650 feet of oil-cut salt water, averaging 3 percent net oil when tester was used at 6710-28 feet. This showing is from Ellenburger, topped at 6606 feet, with possible pay at 6606-42 feet, which was not tested, and at 6713-28 feet. The test is 4½ miles southwest of nearest Ellenburger failure, and 318 feet high on this marker.

Cooke County: Sun Oil Company's Fields 1, 1¼ miles south by west of the Sivells Bend 2-pay area, was drilling shale 6775 feet with the Beasley sand due within 50 feet. This outpost recovered 160 feet of oil-cut mud and 3040 feet of 39.8-gravity oil when tester was used in sand at 6675-86 feet, being equivalent to the upper sand in the field. Bottom-hole pressure was calculated at 2600 pounds. Fields 1 is contracted to 9500 feet, or water in the Ellenburger. Offsets may be started if the Rasure sand is productive. A proposed 6-inch line to the field is awaiting WPB approval.

Two Ellenburger failures one in Schist are listed under wildcat completions for Cooke County for the current week. The Texas Company's Bulkeley, wildcat on the east flank of the Walnut Bend field, tested water through perforations at 6436-51 and 5960-70 feet, and will reperforate.

Clay County: Sussex Oil Company's Walday 1, northeast corner of Section 57, Bosque County school lands and ¾ mile west of the Wood pool, provided first extension in testing 1850 feet of oil at 5951 feet from Bend conglomerate, topped at 5896 feet. Pipe was cemented 9 feet off bottom to complete through perforations. Fourth producer for Anderson-Prichard Oil Corporation's discovery block was assured when Wood 2-B, southeast outpost, logged 2 zones of oil-saturated conglomerate in drilling to 6236 feet.

☆ East Texas

First Shallow Oil Is Assured Lone Star Pool

Eastern Cherokee County deep wildcat tested salt water along with gas; first shallow oil assured for Lone Star pool; Sand Flat field extension is its largest Paluxy well.

Cherokee County: Humble Oil & Refining Company's Manness 1, Jose Musquez survey and 3 miles south of Circle, resumed coring after testing good gas blow with maximum of 750 pounds surface pressure along with 5100 feet of salt water when tester was used at 7850-75 feet in upper Rodessa. First evidence of production appeared when core at 7835-55 feet netted 8 feet of hard lime and shale with stain and porosity in bottom. The well kicked drilling fluid above the rotary table while going in for the second core. The gas showing is considered ample to warrant additional explorations regardless of the outcome of deeper drilling.

G. I. Walker et al's Bowling-Pure 1, plugged back Travis Peak failure in the Lone Star field, flowed oil by heads from Nacatoch sand perforations at 3350-60 feet, thus heralding a shallower pay for this Woodbine sand area. The hole was plugged back from 8370 to 3372 feet, and the oil heads were made prior to the removal of all the rotary mud.

Bowie County: Northern Ordnance, Inc.'s Lumpkin 1, projected Smackover test for the Dalby Springs area cemented 10-inch at 1733 feet. The Nacatoch and Pecan chalk were topped at 1100 feet and 1717 feet, respectively, with elevation of 291 feet.

Hopkins County: Humble Oil & Refining Company's Baber 1, A. Lazarin survey and near Bacon lime production in the Pickton field, was abandoned after acidizing perforations at 7870-7905 feet. Absence of porosity rather than unfavorable structural position was attributed as the cause of this dry hole.

Smith County: Delta Drilling Company's Christian-Arkansas 1, William Keys survey and ½-mile northeast extension to the Sand Flat field, is rated as the largest producer in flowing 429 barrels of 29.6-gravity oil, with gas-oil ratio of 90/1, natural through ¾-inch. Production is from perforations at 7023-

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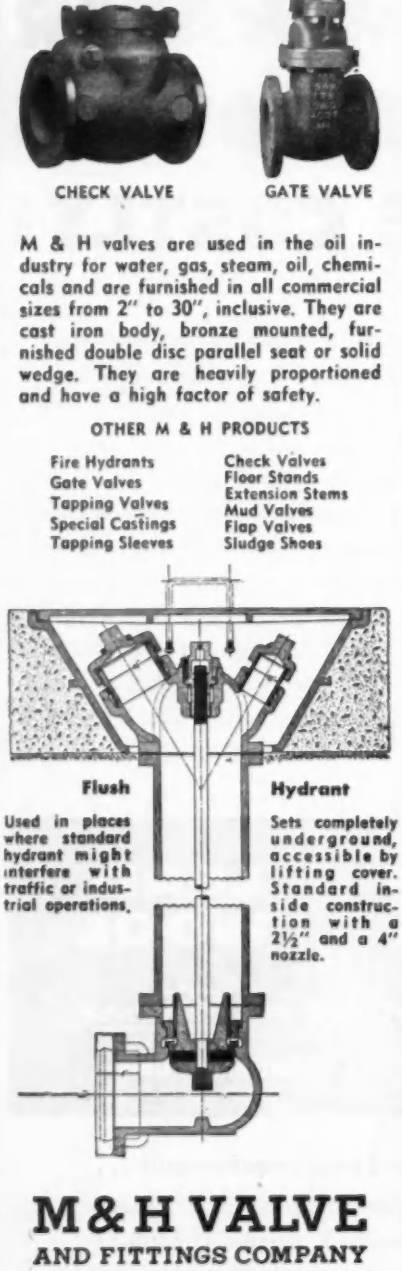

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53 feet in Paluxy, topped at 7005 feet. The new drilling to result from this well will probably hasten the proposed entry of Humble Pipe Line Company into the field, which has 8 Paluxy wells and a marginal deep well.

Sinclair Prairie Oil Company's Shofner 1, projected Smackover test for the Chapel Hill field, was drilling sandy-shale at 10,087 feet. Electrical log failed to indicate evidence of production in the Travis Peak, topped at 8075 feet.

Leon County: Shell Oil Company and Lone Star Producing Company's Tandy 1, first Lower Trinity test for the Buffalo gas field, was fishing for stuck drill-pipe at 10,272 feet in barren Travis Peak, topped at 10,084 feet. An attempt will be made to establish the water level in this zone, then plug back for additional tests of gas shows passed up in the 9000-foot Rodessa and the 9800-foot Pettit.

Freestone County: The Texas Company's Sneed 1, 4200 feet south by west of its Fairfield pool gas-distillate discovery, was having difficulty in making a producer. Perforations between 8206-46 feet, opposite lower zone of porosity in Travis Peak, topped at 7920 feet, proved dry. Later perforations at 8160-90 feet yielded small amount of gas, and treatment with 1000 gallons of mud and regular acid required 3100 pounds pressure to break down the formation, which took the injection under 1900 pounds pressure. Second treatment of acid was scheduled.

Shelby County: M. E. Davis' Pickering Lumber Company 1, W. J. Brittan Survey, 6 miles southeast of Patroon, blew out after a drill-stem test from 5813-29 feet, flowing salt water and an estimated 500,000 cubic feet of gas a day, while drilling at 5851 feet. Heavy mud was pumped into the hole and crews are trying to get back on bottom and resume drilling.

Humble Oil & Refining Company is drilling below 9084 feet in hard sand without further shows in Pickering Lumber Company 1, S. Francois Survey.

Harrison County: Rogers Lacy is scheduled to make further tests of J. R. Tutle 1, J. M. Clifton Survey, 3 miles north of Marshall. The well is reported to have perforated in Travis Peak and tested a good volume of gas, which was choked off as salt water made its appearance. Perforations were squeezed and other shots made. Total depth is around 7027 feet.

Lacy has started Mrs. E. L. Poteet, B. Humphries Survey, 4 miles north of Harleton, an area that is being watched with interest, and is drilling below 1530 feet. He also has material on location for B. C. Quinn 1, Vashti Gibbs Survey, 1 mile west of Harleton, also a wildcat test.

Sun Plans Line

Sun Oil Company plans to lay 20 miles of 6-inch crude oil line from the Delhi, Louisiana, field, to a barge loading terminal at Talla Bena on the Mississippi River. The company has surveyed the right-of-way and plans to erect a pump station and two 55,000-barrel storage tanks at the terminal. Only outlet for the field which has several producers is a small capacity carrier to a railroad loading rack at Delhi.

☆ Illinois Basin

Much Activity Needed if State Meets 1944 Figure

Unprecedented rains in Illinois hold up operations and will result in 1945 completions dropping below 1944 figure unless high average hit during next three months; Richland County opens new area in McClosky lime; Mattoon pool extension sought.

Edwards County: Phillips Petroleum Company's Tait 1, SW SE SW 5-3s-10e, 3½ miles west of production in the south end of the Albion pool, has set pipe for a test of McClosky lime pay at 3247-64 feet. Pipe was set at 3268 and the operator is waiting to drill cement.

Richland County: J. W. Carter's Borah 1, (once listed as a Carter Oil Company venture) NW NE NW 20-2n-10e, 2 miles south of the Calhoun pool and 8 miles south of the city of Olney, has opened a new area with McClosky lime production. When plug was drilled for test of pay at 3199-3202 feet, the well swabbed 105 barrels of oil in 24 hours and after 3000 gallons of acid flowed 386 barrels of oil in 14 hours. Testing continues.

Coles County: Howard Gordon and others are making the latest attempt to extend the growing Mattoon pool. Their venture is Brining 1, NE NW NE 3-11n-7e, 1½ miles southwest of present production. The drill is below 1700 feet and nearing prospective pay zones. Well is located on acreage offsetting land under lease to Carter Oil Company.

Moultrie County: H. M. Williams and others are planning to drill a wildcat test in southeast Moultrie County in an area far removed from production but long held favorable for exploration. Seaboard Oil Company, Continental Oil Company and a few independent operators drilled in the county a year or more ago finding shows of oil but nothing in commercial quantities.

White County: Heath and Halbert's Storms 1, NE NW SW 2-6s-10e, 2 miles west of Maunie, filled 2200 feet with oil in two hours after casing was perforated for test of McClosky lime at 3036-42 feet. Testing continues.

☆ Michigan

Wildcatting at Low Level; Year's Discoveries Few

Tempo of exploratory and field operations drops to a low point with advance work for new wildcat plays reported at a two-year low; 97 wildcat completions this year to June 1 accounted for five oil and three gas discoveries, none of which have led to important fields.

Bay County: Shell Oil Company has resumed drilling operations in the so far disappointing Fraser area after being idle since early spring. After drilling a Dundee discovery which tested 50 barrels per hour and which has averaged 3300 barrels of oil per month under proration since completion, Shell drilled three of the direct offsets dry and other companies farther out added three other failures. PAW has approved 20-acre units with the result that the new development will be on a more saturated program.

Land Sale: Department of Conserva-

tion is offering 38,700 acres of state-owned land for lease at public auction in Lansing, June 29. This includes eight submerged tracts in Lake Huron off the east side of Huron and Sanilac counties. It is a wildcat and will be offered under a new special "protective lease." The special 5-year lease does not grant authority to drill or produce unless written permission is first obtained from the state before the starting of a well. Terms stipulate that the state can withhold the right to drill for "any reason". It represents the first time that the state has offered to lease submerged lake or bay bottom lands and present action is under protest from numerous sporting clubs and commercial fishing interests who contend it may cause serious pollution. The department has indicated it will not permit any drilling unless it is absolutely necessary to protect offset drainage.

Strapping: Pipe line companies and refiners may reach a compromise and go 50-50 on absorbing the difference between oil purchased at the present 98 percent strapping and the producer-urged 100 percent. A refiners' committee is studying the proposal, after snubbing the pipe line company proposal of absorbing the entire difference, about 2½ cents per barrel.

☆ Canada

Extensions to Fields at Conrad, Princess Sought

Stepping up exploitation of its Princess and Conrad strikes on South Alberta Plains, California-Standard seeks east extension at Princess, southwest extension at Conrad.

Princess: California Standard Company has added a second rig to speed exploitation of Devonian Dolomite strike, starting on Princess-CPR 38-22A, NE of lsd 15 22-20-12w4th, quarter mile east of successful No. 58-22A, half mile east of drilling No. 78-22A and three quarters of mile east of discovery No. 18-21A. No. 58-22A on experimental flow test made 100 barrels of 35 gravity oil daily through 7/32-inch choke, and half mile line to storage tanks. Discovery well is flowing 107 barrels daily. No. 78-22A, midway between producers, is drilling below 2900 feet.

Conrad: Moving half mile southwest of current proven limits, California Standard has started Conrad-Province 31-32B in SE quarter of lsd 2 32-5-15w4th. With four rigs in operation, the company soon expects to complete two wells in Ellis sand between 3000-3100 feet, with two more (including southwest extension test) slated for completion the following week. Conrad field, discovered by Standard last July, now has nine producers ranging from 30 to 300 barrels daily. Current stepped-up exploitation and extension program are expected to yield four completions or more monthly.

Coalspur: Imperial-Coalspur 1, Central Alberta Foothills and Canada's deepest completion at 12,955 feet, has cost $580,000 to date. Failure of packers (due to high formation temperature of 225° F.) has prevented determination of Madison limestone contents. Testing has been delayed by a fishing job. The most promising feature of well is high-pressure gas sands penetrated in Lower Benton formation between 9400-9500 feet which will be tested after lime contents determined.

Prince Edward Island: Island Development Company's (Cities Service, Socony-Vacuum) Hillsborough 1 is drilling below 12,681 feet. The well may be continued to 15,000 feet or more to adequately test the Carboniferous and Devonian.

Southern Saskatchewan: Twelfth in a string of deep tests in an effort to determine oil and gas prospects underlying several million acres in Southern Saskatchewan, Imperial Oil Ltd. has commenced its Imperial-Morse No. 1 wildcat in lsd 1 6-18-7w3rd, which will test all formations down to Pre-Cambrian, with probable completion depth around 8000 feet.

Central Alberta Plains: Edgarton Oils 2, lsd 3 20-43-4w4th, has completed at 2688 feet with promise indicated in the Devonian Dolomite. The well, with D. F. elevation 2365 feet, contacted Lower Cretaceous at 2234 feet and Devonian at 2460 feet. Some oil-stained vuggy dolomite showed in upper part of Devonian. Granular, quite porous, and oil-stained dolomite showed in cores from 2620-37 feet and again from 2664 to 2688 feet. Casing has been set to the top of the Devonian, preliminary to test.

Macwhyte Wins Award

The Macwhyte Company, Kenosha, Wisconsin, has been awarded the Army-Navy E a fourth time for excellence in production of war material.

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EXPLORATORY COMPLETIONS

CALIFORNIA WILDCATS

Contra Costa County—Failure: Shell's East Bay 1, 13-1n-3w, Lafayette area, abnd 8408 ft.

Glenn County—Failure: Richfield's Capital Co. 1, 16-21n-1e, Chico area, abnd 4500 ft.

Kern County—Failures: Golden Bear Oil Co.'s E. M. S. 1-32, 32-27s-27e, Premier-Poso area, "M" point placed 2260 ft, Chanac 2370 ft, Santa Margarita 2680 ft, Olcese 3687, Vedder 5182, barren, abnd gray sd 5195 ft.

Miller, York & Claire's Koford 1, 24-28s-28e, Round Mt. area, Olcese 2142 ft, Pyramid Hills 2176 ft, Vedder 2276 ft, abnd gray sd 2325 ft.

Pacific O&G Dev. Corp.'s C.C.M.O. 114, 20-24s-18e, Pyramid Hills area, Temblor 874 ft, abnd 1020 ft.

Richfield Oil Corp.'s Lawson-Bennett 1, 26-30s-27e, South Edison area, Santa Margarita 3048 ft, Walker 3133 ft, Schist 3486 ft, abnd 3497 ft.

Richfield's Wildflower 1, 12-10n-20w, Wheeler Ridge area, Santa Margarita 3814 ft, abnd in sh 5019 ft.

Santa Barbara County—Failure: Whittier Associates' Rufus Buell 1, 16-7n-32w, Los Alamos area, abnd 962 chert.

FLORIDA WILDCAT

Gulf County—Failure: Pure's St. Joe Paper Co. 1, swc 10-7s-9w, abnd 5796 ft.

ILLINOIS WILDCATS

Clay County—Failure: H. Luttrell et al's Phillips 1, sw nw sw 11-4n-7e, abnd 3042 ft.

Jasper County—Failures: Shulman Bros.' Poehler 1, nw nw se 29-6n-7e, abnd 2910 ft.

Texas Co.'s Wyatt 1, sw sw ne 6-7n-10e, abnd 2799 ft.

Jefferson County—Failure: W. O. Schock's Huff 1, ne se nw 22-2s-4e, abnd 3183 ft.

Wayne County—Oil Discoveries: B. Davis et al's Lowe 1, se ne 5-1s-6e, O'Hara 3158-68 ft, pump 27 bbls, td 3320 ft.

Robinson & Puckett's Molt 1, ne nw nw 33-1n-8e, Av 3023-40 ft, pump 63 bbls, td 3226 ft.

White County—Failure: Homer Luttrell et al's Aud 1, ne ne se 21-6s-8e, abnd 3270 ft.

INDIANA WILDCATS

Dubois County — Failure: Elden Hayden's Lampert 1, sw nw nw 7-2s-4w, abnd 725 ft.

Gibson County—Failures: Bennett Bros.' Owen 1, ne sw sw 29-3s-12w, abnd 2795 ft.

Kingwood Oil Co.'s Mumford 1, nec 27-3s-13w, abnd 2954 ft.

Posey County—Failure: Morton Drlg. Co.'s Ford 1, nw nw ne 15-5s-13w, abnd 3046 ft.

KANSAS WILDCATS

Barber County — Failures: Alladin & Landon's House 1, se se nw 22-30s-12w, abnd 4767 ft.

J. M. Huber's Weber 1, se ne se 22-30s-14w, Lans 3996 ft, Simp 4700 ft, Miss 4482 ft, Arb 4788 ft, abnd 4795 ft.

Barton County—Failure: Inland Oil Co.'s Arnold 1, sw sw se 8-19s-15w, Lans 3328 ft, Arb 3659 ft, Reagan 3663 ft, abnd 3683 ft.

Butler County—Failures: War McGinnis et al's Zebold 1, swc 12-25s-6e, Bart 2684 ft, Miss 2758 ft, abnd 2791 ft.

Cromwell & Lewis' Talliffero 1, ne ne sw 31-26s-7e, Lans 1770 ft, Miss 2733 ft, abnd 2775 ft.

Marion County—Failure: Phillips' Bernhard 1, se se sw 24-21s-1e, Lans 2282 ft, Miss 2897 ft, Simp 3382 ft, Arb 3454 ft, abnd 3484 ft.

Norton County—Failure: Bridgeport's Rieman 1, nec 10-5s-21w, Heeb 3176 ft, Lans 3218 ft, Arb 3469 ft, La 3575 ft, granite 3595 ft, abnd 3620 ft.

Pratt County — Failure: Sinclair Prairie's Peters 1, nec sw 31-29s-15w, Lans 4125 ft, Miss 4645 ft, Ki 4700 ft, Vi 4740 ft, Simp 5020 ft, Arb 5085 ft, abnd 5160 ft.

Russell County — Failure: Mid-States Oil Corp.'s Ross 1, se se sw 25-12s-15w, Lans 2987 ft, Arb 3278 ft, abnd 3319 ft.

Woodson County—Failure: C. R. Armstrong's Miller 1, c ne sw 17-24s-14e, Miss 1650 ft, abnd 1778 ft.

KENTUCKY WILDCAT

McClean County—Failure: Miller & Shiarella's Leachman 1, 18-N-27, abnd 2260 ft.

NORTH LOUISIANA WILDCATS

Bossier Parish—Gas Discovery: J. R. Hayden, Tr.'s Ellerbee 1 (owdd), 1170 fr nl 660 fr el 3-20n-13w, perf 34 shots 8036-42 in Cotton Valley "D" sd, flow 20 bbls dist, 8 bbls sw, 300,000 gas, ¼-in, otd 6022 ft, td 9016 ft.

Claiborne Parish—Failure: F. A. Callery's Sallie Williamson 1, c se se ne 28-22n-7w, abnd 6255 ft.

NORTH LOUISIANA OUTPOSTS

Caddo Parish—Longwood Extension: Phillips' Leake 1, c ne nw 32-19n-16w, perf Travis Peak 5900-ft level, flow 156 bbls oil, 500,000 gas, ¼-in, tp 400-450 lbs, td 6300 ft.

DeSoto Parish—NE Logansport Extension: Ark-La Gas Co.'s Dema P. Furlow 1, 100 n&w of c 25-12n-16w, perf 72 shots 6008-23 ft, 10,000 gals acid, open flow 165,000 gas, rock pressure 2816 lbs, td 6782 ft.

SOUTH LOUISIANA WILDCAT

Lafourche Parish—Failure: Stickney, Hawkins-Signal O&G Co.'s LaGarde 1, 2211 s 474 e of nwc sect 26 or start nwc sect go s 20° w on wl sect 2227 th s 67¾° e 331 in 26-15s-17e, abnd 10,230 ft.

MISSISSIPPI WILDCATS

Covington County—Failure: Cities Service's Rubin Aultman 1, nec nw 22-7n-16w, Tuscaloosa 8146 ft, Massive sd 9497 ft, abnd 9700 ft.

Jones County—Failure: Gulf's E. S. Gambrell 1, sec ne 34-10n-14w, Eutaw 6872 ft, Tuscaloosa 7433 ft, Massive sd 8681 ft, abnd 9033 ft.

Rankin County—Failure: Atlas O&R Co.'s Freida Burnham 1, sec ne 24-3n-5e, Eutam 6520 ft, Tuscaloosa 6794 ft, Massive sd 7918 ft, abnd 8166 ft.

Yazoo County: Atlas O&R Co.'s Jones-Dixon 1, swc se 21-12n-3e, Eutaw 5135 ft, abnd 5297 ft.

NEW MEXICO WILDCAT

Lea County—Failure: Stanolind et al's State (SE Vacuum Unit) 1-L, c ne ne 17-18s-36e, elev 3845 ft, anhy 1940 ft, salt 2055-3150 ft, Yates 3210 ft, red sd 4320 ft, brown li 4785 ft, abnd 5522 ft.

OKLAHOMA WILDCATS

Cleveland County—Failures: Ed Kubat's Staats 1, nw nw se 2-6n-1e, Wdfd 5631 ft, Hunt 5878 ft, Vi 6050 ft, 1st Wx 6452 ft, abnd 6463 ft.

J. E. Trigg Drlg. Co.'s Gray 1, sw ne 29-9n-1w, Syl 6910 ft, abnd 7373 ft.

Creek County—Failure: Ed Kubat's Brown 1, ne nw ne 18-16n-8e, Vi 3638 ft, 1st Wx 3693 ft, 2nd Wx 3720 ft, abnd 3739 ft.

Grant County—Failure: Derby Oil Co.'s Powell 1, ne ne nw 19-29n-5w, Miss 4629 ft, Arb 5390 ft, abnd 5433 ft.

Lincoln County—Failure: Dudley Morgan's Wagoner 1, se sw ne 33-17n-6e, Miss 3400 ft, abnd 3412 ft.

Pawnee County—Failure: Transwestern Oil Co.'s Brazda 1, ne sw sw 33-22n-3e, Wx 4430 ft, abnd 4484 ft.

Payne County—Failure: Wilcox Oil Co.'s Park 1, nw nw se 19-19n-2e, abnd 4940 ft.

Pontotoc County—Failure: M. C. Mitchell's Norman 1, se ne se 8-5n-4e, abnd 3311 ft.

Stephens County—Failure: Luncy & Shears' Thomas 1, sw sw ne 23-1n-6w, abnd 3009 ft.

WEST TEXAS WILDCATS

Dawson County—Failure: Texas Co.'s Higginbotham 1, 660 out nwc Lbr 16, Lge 279, Hutchinson CSL sur, elev 3030 ft, anhy 2100 ft, Yates 2930 ft, San Andres 4590 ft, Cedar Lake field porosity 4810 ft, Clear Fork 5625 ft, abnd 7697 ft.

Lubbock County—Failure: Geo. P. Livermore's Rollins 1, c se nw E.L. & RR. Co. 5, blk P, elev 3368 ft, anhy 1630 ft, Glorietta 4540 ft, Tubb sd 5860 ft, abnd 6551 ft.

Lynn County—Failure: D. D. Feldman et al's Edwards 1a, 660 wel 880 nsl E.L. & RR. Co. 312, blk 3, elev 3178 ft, abnd 7503 ft.

WEST TEXAS OUTPOST

Hockley County—Levelland Extension: Texas Co.'s Coble 1-A, 580 out nec Lbr 20, Lge 67, Hardeman CSL sur, 2¼ mi w of its Levelland pool disc, elev 3624 ft, San Andres 3830 ft, pump 97 bbls oil, 20 bbls wtr, 14,000 gals acid open hole 4770-4860 ft.

WEST TEXAS NEW PAY TEST

Ward County—South Ward Deep Failure: Standard of Tex.'s Burgin 1-X, c n¼ of s¼ H&TC Ry. 15, blk 34, offset 2500-ft prod, elev 2568 ft, Yates 2210 ft, San Andres 3390 ft, San Angelo 4540 ft, Wolfcamp 6037 ft, tan chert 8348 ft Mississippian 9272 ft, abnd 10,008 ft.

WEST CENTRAL TEXAS WILDCATS

Coleman County—Failure: C. P. (Pete) Burton et al's Fine 1, 330 snl 2500 wel of N. B. Waters sur No. 697, elev 1966 ft, abnd 3514 ft.

Coleman County—Gas Discovery: W. W. Harvey-H. H. Henderson-Jack Hagan's McCord 1, 600 s 614 e of nec of sect 318, W. Shepherd sur, but in J. W. Meeks sur No. 159, 3⅜ mi w of prod, elev 2155 ft, Fry sd 3430 ft, 4,160,000 ft dry gas, natural, sand 3430-62 ft, td 3880 ft, pb 3462 ft.

Jones County—Failure: Phillips' Foster-Pearl (Pan) 1, 980 out nec sw T&P Ry. 17, blk 16, elev 1663 ft, Dothan 1720 ft, base Saddle Creek 2090 ft, Gunsight 2393-2412 ft, Swastika 2455-2470 ft, abnd 2565 ft.

Palo Pinto County—Failure: Edgar T. Hart Est, et al's Mallory 1, c ne ne T&P Ry. 37, blk 4, Mississippi 4547 ft, Ellenburger 4719 ft, abnd 4919 ft.

Stephens County—Failure: Sinclair Prairie's Repass 1, 860 nsl 330 wel TE&L Co. sect 1066, elev 1104 ft, Bend 3190 ft, Marble Falls 3770

The OIL WEEKLY'S TRADING POST

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■ FOR SALE: No. 5½ Keystone Spudder International motor, complete two strings tools capacity 1800 feet. This spudder was bought new in 1944 and only operated six months. Address: Howard Thomas, Baxter Springs, Kansas.

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■ WANTED: Driller, experienced on Sullivan hydraulic core drill. Location, Rocky Mountains. Address: Box 35, c/o The Oil Weekly, Houston, Texas.

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■ WANTED: Production Superintendent for Texas Gulf Coast and North Louisiana. Prefer a man with engineering background. Address: Box 50, c/o The Oil Weekly, Houston, Texas.

■ WANTED: One graduate chemical engineer with up-to-date mud, oil-field, corrosion and salt water disposal experience. Total field experience 4 to 7 years. Location, New York, with occasional trips to domestic and foreign fields. Those interested communicate. Address: Box 51, c/o The Oil Weekly, Houston, Texas.

■ WANTED: One graduate mechanical, mining or petroleum engineer as equipment engineer with 4 to 10 years experience in allocation, design and standardization of drilling, production, condensate and compressor equipment. Location, New York, with occasional trips to domestic and foreign fields. Those interested communicate. Address: Box 52, c/o The Oil Weekly, Houston, Texas.

■ WANTED: Two graduate chemical engineers with up-to-date mud experience backed by 2 to 3 years experience in field. Preferably single. Location, South America. Those interested communicate. Address: Box 53, c/o The Oil Weekly, Houston, Texas.

WANTED

Comptroller

Long established California drilling contractor has excellent opening for man with experience in drilling business who can qualify as Comptroller. Reply in full stating age, education, experience and salary wanted. Address: Box 55, c/o The Oil Weekly, Houston, Texas.

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P. O. Box 2608 Houston 1, Texas

ft, Mississippi 4360 ft, Ellenburger 4489 ft, abnd 4713 ft.

Taylor County—Failure: Alder Oil Co.-Merry Bros. & Perini's Sealy-Smith 1, 990 snl 330 wel Lbr 15, Lge 146, Grimes CSL sur, elev 1851 ft, abnd 2645 ft.

SOUTHWEST TEXAS WILDCATS

Duval County—Failure: Argo Oil Corp.'s Mrs. Annie M. Bagnall 1, 330 fr nw&swl H&W sur 249, 1120-ac lse, abnd 6310 ft.

McMullen County—Failure: Dee Davenport's Annie Graves Dolph et al 1, 5792 fr m/wly/wl 3900 fr m/sly/sl 4042-ac lse, M. A. Grist sur, temp abnd 7237 ft.

Zapata County—Failure: Dulup Oil Co.'s San Juan Ramirez et al 1, 1549 fr sel 1740.2 fr nel sur 7, 467 fr sel 190 fr nel blk 8, 800-ac lse, abnd 1961 ft.

Webb County—Failure: Texas Co.'s W. R. Nicholson 1, 660 fr e&sl 4706.6 fr wl BS&F sur 479, 3033.4-ac lse, abnd 7014 ft.

LOWER TEXAS COAST WILDCATS

Brooks County—Wet Gas Discovery: Texas Co.'s Mary M. Lasater 3, 4620 fr e&nl 2600.26-ac lse, Loma Blanca, Francisco Guerra Chappa Gr, Burton & Donforth subdvn of Parrits Rch, 4175 e se of Well No. 2, perf 24 shots 6656-60 ft, flow 28 bbls fluid, 28% wtr, 3/16-in, gor 72,000/1, 4,500,000 gas, open flow, tp 2325 lbs, td 8518 ft.

LaSalle County — Failure: Quintana Pet. Co.'s South Tex. Synd. 5-F, 10,300 fr m/sly/sec "A" lse, 25,625 fr nwc "E" lse on 96,000-ac lse, T. W. House sur 45, se Washburn fld, abnd 5500 ft.

San Patricio County—Failure: Plymouth Oil Co.'s Ruth Patrick Pittman 1, 330 fr el 1650 fr nl sect 7, Taft Farm Lds, 2nd subdvn, 200-ac lse, abnd 6010 ft.

Victoria County—Failure: F. A. Gillespie & Sons Co.'s J. W. Ragsdale 1, 330 fr nwl 660 fr nel blk 34, subdvn Roseborough Rch, Fernando de Leon sur 180-ac lse, abnd 6815 ft.

UPPER TEXAS COAST WILDCATS

Grimes County—Failure: R. F. Spears-Geo. P. Lawrence's J. E. Quinn 1-A, 6580 fr sl 9200 fr wl S. F. Austin sur, blk 17, c 40-ac blk, 1080-ac lse, Yarboro area, test in 3600-ft Cockfield sd rec 1040 ft oil before setting csg, so. mud and wtr fr 3612-20 ft, abnd 7515 ft.

Harris County—Failure: Houston Oil Co. of Tex.'s Carter Investment Co. 1, 1920 w of Carpenter's Bayou 2022 n of sly sl of 1296.35-ac lse, 467 n of sl of Talbot Patching sur, 1325 e of Frazier & Bunte's 4717-ft dry hole on same lse, Sheldon area, hit cavity, had sw flow, abnd 6524 ft.

Wharton County—Failure: El Campo Rice Milling Co.'s John Mach 1, 1320 fr el 330 fr nl 80-ac lse, I&GN sur, 1 mi e of El Campo, abnd 6265 ft.

NORTH TEXAS WILDCATS

Archer County—Failure: L. T. Burns et al's Love 1, 1650 out swc sect 76, blk 4, Clark-Plumb sur, elev 1091 ft, abnd 4090 ft.

L. Eric Jones & Dellenbarger Machine Co.'s Slopansky 1, 1350 snl 750 ewl blk 64, J. W. Harris subdvn, abnd 1470 ft.

F. P. Timberlake-H. M. Kelleher's Prideaux 1, 2300 ewl 3000 snl John Walker sur A-676, abnd 750 ft.

Cooke County—Failures: S. D. Johnson et al's Bonner 1, 150 out swc A. Emanuel sur A-1198, elev 848 ft, schist 2193 ft, abnd 2195 ft.

Texas Co.'s Ramsey 1, 2120 snl 1650 ewl of B. Lusk sur A-569, elev 876 ft, Ellenburger 2445 ft, abnd 2726 ft.

Nu-Enamel Oil Operating Co.'s Pulte 1, 330 out nec Thomas Carson sur A-203, Ellenburger li 1960 ft, solid li 2023 ft, abnd 2202 ft.

King County—Failure: Rogers Lacy-L. S. Flannery's Ross 1, 330 fr nwl 797 fr swl J. B.

SITUATION WANTED

■ For Service Abroad. Business Administrator, 32, B.Com., M.E. Ten years practical experience U. S. and Canada—Costing, Audits, Processing, Mechanical Engineering, Business Administration, assuming responsibilities. British subject, speaking French and German. Honorably discharged veteran R.C.A.F. with valid British Passport for Foreign Travel. Excellent References. Apply in Confidence—Advertiser, Post Office Box 90, Station "H," Montreal 25, Canada.

■ Married man, 40, with well rounded background Gulf Coast Geology, at present buying for large company in Mississippi, desires connection with small company, or large independent, in Louisiana. Salary or interest acceptable. Address: Box 54, c/o The Oil Weekly, Houston, Texas.

LEASES, DRILLING ACREAGE, ETC.

■ FLORIDA low-priced, royalties and drilling blocks, in areas extensively leased by majors. Address: Box 2191, Orlando, Florida.

■ DRILLER, when you want statewide sizable lease 15/16 free for completed well first year, let us know. John H. Smith, First National Bank Bldg., Longview, Texas.

Townsend sur A-952, elev 1662 ft, abnd 5512 ft.

Throckmorton County—Failure: Bridwell Oil Co.'s Cook 3, 800 w 450 s of sec of E. E. Hull sur, but in B. C. Riley sur A-1325, abnd 1336 ft.

Wichita County—Failures: Wood-Closuit & Knight's Krohn 1, 1750 nsl 200 wel of blk 252, Waggoner Colony Lands, abnd 2105 ft.

Wood-Closuit & Knight's Foster 1, 1750 snl 150 wel of sect 1, SA&MG Sur A-272, abnd 2072 ft.

WESTERN CANADA WILDCATS

Alberta Foothills Belt—New Valley: Royalite Oil Co.'s New Valley No. 1, lsd 2 22-21-3w5th, ABANDONED, completed 10,259 ft; Madison lime topped 10,128 ft; water showed in lime after acidization.

South Alberta Plains—Conrad: California-Standard's Conrad-Province 15-35B, lsd 9 35-5-15w4th, 3 mi e of Conrad, abnd 3414 ft in Madison lime.

WESTERN CANADA OUTPOSTS

South Alberta Plains — Conrad Extension: California-Standard's Conrad-Province 51-5A, lsd 3 5-6-15w4th, pump 150 bbls 27-gr, td 3011 ft.

Princess Extension: California-Standard's Princess-CPR 58-22A, lsd 14 22-20-12w4th, flow 100 bbls 35-gr, td 3977 ft.

WILDCAT STARTS

ALABAMA

Wilcox County: Southern Nat. Gas Co.'s G. W. Morgan Estate 1, se se sw 32-12n-5e, lcn.

ARIZONA

Coconio County: Burrel Collins et al's Collins-Navajo Indian Reservation 1, se ne 36-34n-8e, 3000-foot test.

ARKANSAS

Benton County: Vincent Trabucco's Charles Henderson 1, ne se 29-19-31, lcn.

Miller County: Barnsdall Oil Co.'s W. S. Nichols et al 1, c ne nw 20-18-28w, lcn.

Sebansian County: Vincent R. Trabucco's E. M. and Berta Tucker 1, c n½ nw sw 36-5-31, lcn.

CALIFORNIA

Tulare County: Jergins Oil Co.'s Cloer 1, 23-22s-26e, lcn.

Kern County: Tide Water's Olcese 1, 21-28s-29e, lcn.

U. S. Drilling Co.'s S. P. 1, 33-26s-28e, dr.

Williams Bros. Oil Co.'s Layman 1, 12-28s-19e, lcn.

Merced County: Tide Water's Soares 31-36, 36-8s-8e, grade.

Santa Barbara County: Whittier Associates' Walter Buell 1, 15-7n-32w, ru.

COLORADO

Moffat County: Ralph M. Parsons Co.'s Verna Smith 1, sw sw nw 6-9n-92w, Great Divide area, mi rotary rig.

ILLINOIS

Edwards County: Texas Co.'s Koegle 1, ne ne nw 16-1n-14w, lcn.

Fayette County: Dale Hopkins' Myers 1, se se sw 25-8n-3e, lcn.

Franklin County: Skelly's Merkel 1, ne nw se 3-5s-1e, lcn.

Marion County: W. H. McKain's Beard 1, sw sw se 26-3n-4e, lcn.

Wayne County: Geo. Schoonmaker's Berg 1, se sw sw 22-1s-9e, lcn.

White County: Nation Oil's Upton 1, nw ne ne 30-4s-8e, drlg 337 ft.

Fox & Fox's Pomeroy 1, nw se se 26-6s-10e, lcn.

INDIANA

Posey County: Farm Bureau Oil's Coudret 1, sw se nw 14-4s-12w, lcn.

KANSAS

Barton County: W. L. Hartman's Harris 1, ne se nw 31-19s-12w, woc 298 ft.

Wood River Oil Co.'s Fleske 1, se sw nw 3-20s-15w, lcn.

Butler County: Ward McGinnis' Zeibold 1-B, ne nw 7-25s-7e, dr 625 ft.

Edwards County: Superior's Garey 1, nw nw nw 27-25s-18w, lcn.

Ellis County: Bridgeport's Snapp 1-A, nwc 27-11s-16w, mirt.

Stearns & Vernon's Forelick 1, nec 3-13s-16w, mim.

Cities Service's DeChant 1, nwc 27-13s-19w, rur.

Pawnee County: Helmerich & Payne's Johnson 1, sw sw se 14-22s-16w, rur.

Rice County: Globe Oil Ref. Co.'s Rossler 1, sw sw se 30-18s-9w, dr 1425 ft.

Rooks County: Doley Oil Co.'s Lane 1, ne ne sw 33-10s-19w, lcn.

Sumner County: Carter's Webber 1, c nw se 26-31s-4w, lcn.

Trego County: A. R. Jones et al's Wahlborg 1, sec 2315s-22w, rur.

NORTH LOUISIANA

Bienville Parish: Ohio Oil Co.'s L. L. Brinkley 1, 2010 s 1861 w of nec 6-16-7w, lcn.

Bossier Parish: Barnsdall Oil Co.'s Padgett-Bundy 1, c nw¼ sw¼ 17-20-12w, lcn.

Caddo Parish: Phillips' Jodie 1, 660 n&e of swc ne 32-19-16w, lcn.

Richland Parish: Southport Pet. Co.'s Lola S. Howard 1, c ne ne ne 4-16n-8e, lcn.

Humphrey and Wynne's M. M. Valentine 1, c s½ sw ne 12-15-6e, lcn.

MISSISSIPPI

Grenada County: J. R. Lockhart's J. R. Hawkins 1, nw nw 25-23n-6e, lcn.

Holmes County: H. A. Fleishman's J. Garland 1, swc nw 27-13n-3e, lcn.

Marion County: Gulf's E. H. Bradshaw 5, nec 28-3n-17w, rds.

Warren County: Nat. Assn. Pet. Co.'s Jeff Davis Heirs 1-A, sec 36-14n-1e, dr.

MISSOURI

Atchison County: Claude McQueen's Meyers 1, se ne sw 13-63n-41w, fish 1330 ft.

MONTANA

Liberty County: Texas Co.'s State 1, se se nw 16-33n-7e, Joplin area, lcn.

NEW MEXICO

Chaves County: E. J. McCurdy, Jr., et al's Fred Pool 1, c sw nw 21-11s-30e, 3500-ft Glorietta cable test.

E. J. McCurdy, Jr., et al's Ross 1, sw sw ne 35-12s-27e, 3500-ft Glorietta cable test.

OKLAHOMA

Garfield County: Ace Gutowsky et al's Johnson 1, nw ne 19-24n-5w, lcn.

Garvin County: Phillips' Minerva 1, ne sw ne 21-1n-3w, lcn.

W. A. Delaney et al's Brickman 1, sw se nw 12-3n-2e, woc.

Logan County: Fox & Fox's Ray 1, sw se 28-17n-3w, dr 1906 ft.

Oklahoma County: Magnolia's Dills 1, ne sw ne 22-11n-1w, rog.

Texas County: Phillips' Patkins 1, sw sw ne 32-1n-17ecm, lcn.

Tillman County: Bridwell Oil Co.'s Mount 1, se ne 14-4s-16w, lcn.

WEST TEXAS

Ector County: Stanolind's Cummins-Cole 1, c ne ne T&P Ry. 5, blk 45, T-1-N, ⅝ mi nw N. Goldsmith fld, 11,000-ft Ellenburger test.

Yoakum County: Dunagan Bros. & Brahaney's Watson-Skelly 1, c ne ne sect 422, blk D, J. H. Gibson sur, 7800-ft Clear Fork test.

WEST CENTRAL TEXAS

Callahan County: H. A. Stebinger et al's H. M. Kennard 1, nw nw nw E.T. Ry. sect 10, 2000-ft cable test.

Jones County: Alder Oil Co.'s Mamie Munroe 1, 952 snl 330 wel BBB&C Ry. 98, 4½ mi nw Anson, 4000-ft cable test.

Humble's W. D. Hawthorne 1, 467 ewl 7000 nsl Maria R. Longoria sur No. 258, 3500-ft test.

Stephens County: W. J. Gourley et al's J. M. Ward 1, c ne se T&P Ry. 19, blk 4, 4800-ft cable Ellenburger test.

SOUTH CENTRAL TEXAS

Bastrop County: General Crude's Addie M. Powell 1, 3700 s of m/nly bend of Colorado River 1000 w of m/ely bank of river, 3½ mi nw of Bastrop, 3500-ft rotary test.

Williamson County: H. W. Snowden's Annie Killdorf et al 1, 330 fr nel 1040 fr nwl 125-ac lse, G. M. Reese sur, 1500-ft cable tool test.

SOUTHWEST TEXAS

Duval County: Glenda Oil Co.'s Leila C. Peters 1-A, 330 fr wl 990 fr nl sur 397, 140-ac lse, 3000-ft test.

H. J. Porter's Jesus V. Ruiz 1-B, 340 fr swl 330 fr sel AB&M sur 136, and 42.78-ac lse, 4250-ft test.

Republic Nat. Gas Co.'s C. K. Gravis 1, 467 fr n&el 467 fr nwl sur 254, 160-ac lse, 5400-ft test.

Jim Hogg County: H. M. Amsler's M. Garza 1, 330 fr ne&swl blk 9, sur 39, 160-ac lse, 507 ft elev, 3000-ft test.

Dulup Oil Co.'s San Juan Ramirez et al 2, 660 fr sl 200 fr el blk 10, 800-ac lse, sur 271, 660 e of well 1, 2500-ft test.

McMullen County: Quintana Pet. Corp.'s Ethel Lowe Craig 1, 2915 fr el 3500 fr sl sect 17 4644.6-ac lse, J. Poitevent sect 17, 7000-ft test.

Starr County: W. D. Kennard's D. R. Semmes 1, 330 fr w&nl 145-ac lse, proc 88, 3000-ft test.

LOWER TEXAS COAST

San Patricio County: H. M. Amsler's C. L. Flinn 1, 467 fr nl 467 fr sel 100-ac lse, 1st subdvn Taft Farm Lds lot 1, blk 3, 6500-ft test.

Willacy County: Standard of Kan.'s E. A. Mann 1, 660 fr n,s,e&wl 40-ac lse, San Juan de Carricitos Gr, sh 64, Narcisso Tr, blk 12, sect 5, 10,500-ft test.

UPPER TEXAS COAST

Austin County: Union Prod. Co.'s John E. Hintz 1-A, 3030 fr el 300 fr nl sect 179 H&TC sur, 300 ne at ra fr State Highway 73, 702.34-ac lse, 9000-ft test.

Brazoria County: General Crude's Belle H. Wisdom 5, 1752.4 fr sel 2250 fr nel 840-ac lse, Abraham Darst sur, 1 mi w of Damon Mound, deep flank test, 6000-ft test.

Chambers County: E. R. Brann et al's R. J. Barrow 1, 660 fr n, e&wl 80-ac lse, 660 w of T&NO sur sect 5, John S. Roberts sur, 9000-ft test.

E. R. Brann et al's Canada & Smith 1, 1980 fr el 660 fr nl sect 7 T&NO sur, 80-ac lse, 10,000-ft test.

Harris County: A. W. Gregg's N. W. Hooper & C. Nailor 1, 330 fr n&wl Wiley Smith sur, 60-ac lse, 2000 s of Cockburn's Lubbock 1, 4100-ft test.

Montgomery County: Humble's May Oualline et vir 1, 660 fr nl 1684 fr wl 310-ac lse 1470 nw of nearest pt on el lse alg Spring Crk, Thomas Ives sur, Caney area, lcn.

Wharton County: H. C. Cockburn's T. M. Neal & C. Davis 1, 900 fr nl 1600 fr el 532-ac lse 550 se at ra fr Colorado River, J. Smith & McKinzie sur, set 10¾-in, 765 ft.

NORTH TEXAS

Archer County: R. W. Darden et al's W. C. Thomas 1-P, 1650 nsl 150 wel of blk 1, N. Thomas sur A-454, 1450-ft rotary test.

White & Duncan's L. Kinder 1-B-96, 1200 wel 150 snl sect 96, blk 4, Clark-Plumb sur, 1300-ft rotary test.

Clay County: Kadane-Griffith Oil Co.'s G. D. Rigsby 1, 330 out nwc blk 18, Specht-McCutcheon sur, 4000-ft test.

Jack County: J. B. Daniel et al's W. L. Carney 1, 574 fr m/w/el 161 fr m/n/nl of I. Farris sur A-220, 3500-ft rotary test.

Montague County: Nu-Enamel Oil Operating Co.'s Mrs. S. C. Agee 1, 330 out nwc blk 21, Kaufman CSL sur, 5000-ft Ellenburger test.

Wichita County: W. H. Spradling et al's J. B. Spradling 1, 450 nsl 750 wel blk 306, Waggoner Colony Lands, 2000-ft test.

Young County: Kerlyn Oil Co.-Phillips' J. W. Bryan 1, 330 snl 1464 ewl TE&L Co. sect 1902, 3 mi n by e Jean, 5300-ft Ellenburger test.

TEXAS PANHANDLE

Ochiltree County: Olney F. Flynn et al's Hoover-Patten 1, sw sw ne H&TC Ry. 213, blk 43, 24,000-ac blk, 6500-ft test.

WYOMING

Park County: Honolulu Oil Co.'s Government 4, nw nw nw 3-47n-103w, 2½ mi se disc well, Fourbear structure, rig.

Continental's Ida Goodstein 3, sw ne sw 20-57n-99w, South Elk Basin, to test gas sds passed up in disc well.

WESTERN CANADA

South Alberta Plains — Conrad: California-Standard's Conrad-Province 31-32B, se lsd 2 32-5-15w4th, dr.

Princess: California-Standard's Princess-CPR 38-22A, ne lsd 15 22-20-12w4th, ru.

Southern Saskatchewan — Morse: Imperial-Morse's No. 1, c lsd 1 6-18-7w3rd, ru.

Nylon Plant Completed

The DuPont Company has completed construction of a nylon plant at Orange, Texas. Virginia Bridge Company, a subsidiary of United States Steel Corporation, has the contract to furnish 3000 tons of structural steel for 14 buildings which will comprise the plant. Shipments of steel will begin July 1.

Company Acquired

General American Transportation Corporation, Chicago, Illinois, has acquired Eclipse Moulded Products Company, of Milwaukee, Wisconsin, manufacturers and distributors of plastic products. Management personnel of the latter commany will remain unchanged.

Awarded Sixth E

Farrell-Birmingham Company, with plants at Ansonia and Derby, Connecticut and Buffalo, New York, has been awarded the Army-Navy E for the sixth time, for excellence in production of wartime equipment. The company also has been awarded the Maritime M.

SQUEAKS from the BULL WHEEL

All Sorts

The spinster was embittered.

"I hate the very sight of them. I had a sweet canary and a cat got it. I had some wonderful gold fish and a cat got them. I had a fiance once and—oh, don't mention cats in my presence!"

Life Is Like That

"I'll bet you think twice before leaving that gorgeous wife of yours alone for the evening."

"I'll say. First I have to think up an excuse for going out, and then a reason why she can't come."

Pointed Love

Most popular want ad of the day:

"Soldier with two years overseas service wants to correspond with widow who has 2 or 3 children. Object, 85 points."

CORE DRILLING SERVICE
to 2000 ft.
New Shot Hole Drills For Sale
Delivery, 3 Months
ROUSE
EXPLORATION DRILLING CO.
3511 Milam Phone J 2-4377
HOUSTON, TEXAS

Why Use Tubing?
you can
PUMP MORE OIL
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For the whole story, illustrated, phone or write:
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2501 Virginia St. Fort Worth, Texas
Phone 2-6860

See LAMTEX, Composite Catalog, pages 1570-1571

This Curious World

Said a little dog when he espied his first parking meter: "Phooey! Now ya gotta pay!"

Business is what, when you haven't got any, you go out of.

In these times, lighting three cigarettes on a match is not only unlucky—it's unlikely.

A state liquor monopoly in the Midwest is said to have enough brandy on hand to float a battleship, which should be an exhilirating experience for the barnacles.

A good line is the shortest distance between two dates.

With "a war on," most stores have caused the law of supply and demand to be changed to supply and request.

The Lady Insists

When a pretty girl got on the crowded bus, a pale-loking fellow started to get up. But she pushed him back in the seat and said she preferred to stand. Again he tried to get up and again she pushed him back. Finally he yelled, "Now listen, lady! I passed my stop two blocks back—let me out!"

Long Loaf Ahead

"What's the matter with that gold-bricking recruit?"

"He's sick, sergeant."

"He's not sick—he only thinks he's sick."

(Time marches on for three hours.)

"How's that recruit who thought he was sick?"

"Oh, he thinks he's dead, Sergeant."

Anti-Nudist

A man entering a grocery store asked the price of "some shorts for my pigs," whereupon the girl clerk eyed him suspiciously, and crossed with her left thus: "Oh, another wisecracker, eh? I suppose you'll be wanting brassieres for your cows next!"

Treed

Two men were climbing a telephone pole in order to repair a cable. A woman driving in her automobile saw them and remarked to her companion: "Look at those nitwits. From the way they're acting, you'd think I'd never driven a car before."

Too Much Port

The sailor had been walking down the street with one foot in the gutter and the other on the sidewalk. He was not doing so well when he met the shore patrol.

"You're drunk," said the S. P.

"Thank goodness! I thought I was lame."

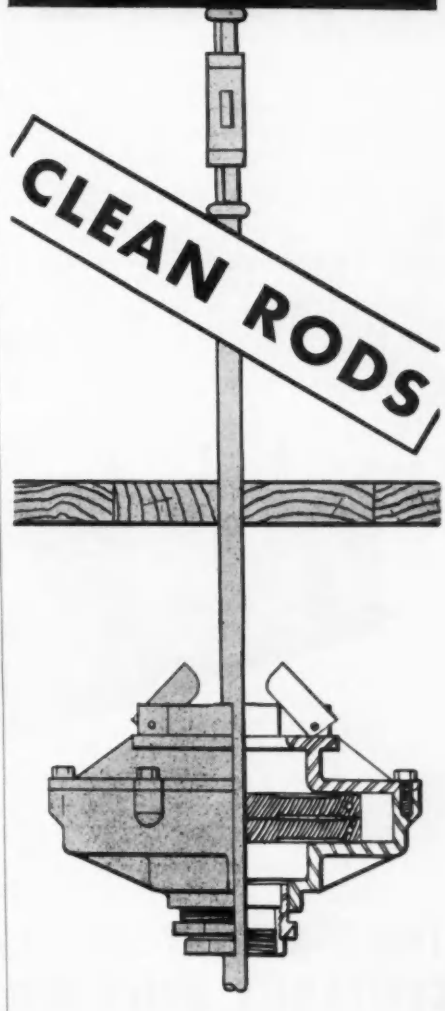
A Gobbler Ungobbled

"There," said the bride. "My first turkey."

Her husband eyed the smoking bird with appreciation. "You're wonderful. What did you stuff him with?"

"Stuff him? Why, darling, this one wasn't hollow."

"Best Bet Yet"



UNIVERSAL TYPE SUCKER ROD WIPER

Designed for all sizes of rods. Cast steel body—Plain or safety cover. Adapted to fit pipe from 2″ to 3″ reinforced.

Replaceable double seal discs, made from oil resistant PBX synthetic rubber, Patterson-Ballagh's new development.

See Composite Catalog

Patterson-Ballagh SUCKER ROD WIPER
Los Angeles 1 Houston 10 New York 6

Cement

Few persons have any conception of the degree to which they are surrounded by and dependent upon the uses of cement. It was one of the earliest factors in civilization. It has become indispensable to modern construction. Concrete, made with portland cement, is now one of the world's major building materials.

Without the use of cement, the oil industry would not have made the progress it has achieved. Cementing has been an accepted practice for many years, and modern technique of drilling and completing wells is dependent upon cement.

"The Magic Powder," a new book by Earl J. Hadley, tells the story of the cement industry and the Universal Atlas Cement Company.

As a record of the development and growth of a product, an industry, and a company, "The Magic Powder" is worthwhile. Published by G. P. Putnam's Sons, New York, price, $3.50.

Industrialist's Story

"The world of tomorrow will be more exciting, more important, and fuller of opportunity than any we have known. Any man may play as full a part in it as his capacity, ambition, and energy permit."

So P. W. Litchfield, chairman of the Goodyear Tire & Rubber Company begins an unusual book, "Autumn Leaves —the Reflections of an Industrial Lieutenant." The book is a statement of his personal and business philosophy as evolved in 45 years in industry.

Presented through a background of challenging confidence, the author's reflections combine into a very inspiring philosophy, though the book is not an Horatio Alger study. Gleaned from a great career in American industry, the ideas are as much a product of the American scene as the free social and economic pattern that evolved with the automobile. Since the author is an American of the automotive era, it is no surprise to find his ideas, colored by the new technologies of transportation, giving emphasis to speed and economy, courage and freedom, and a liberal view of trade and labor relations. Likewise, there is a characteristic abhorrence of sheltered inefficiency and waste.

Dr. Jerome C. Hunsaker, of the Massachusetts Institute of Technology, in a foreword says: "Any young man having his personal and business life ahead of him will find it worthwhile to read and ponder the values and standards that have sustained Paul Litchfield's own life." The book is published by Corday and Gross, Cleveland, Ohio.

World Oil Policy

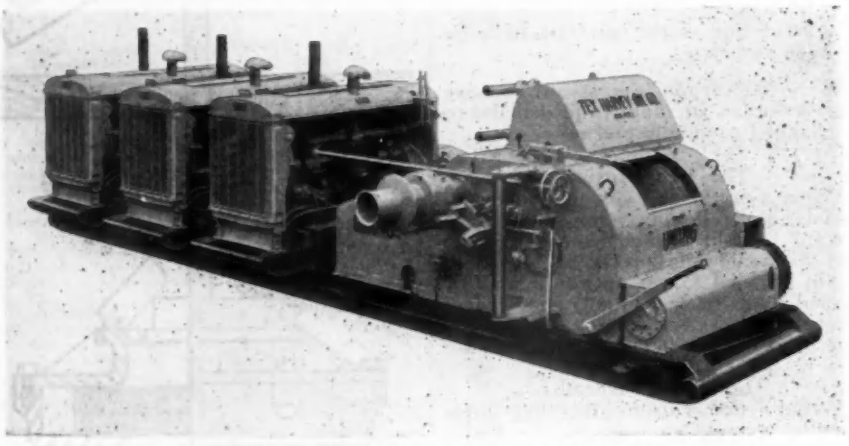
The Petroleum Industry Research Foundation, Suite 316, 122 East 42nd Street, New York 17, has published two booklets, the first, "World Oil, Fact and Policy," and the second "U. S. Foreign Oil Policy."

"World Oil, Fact and Policy" gives a realistic analysis of the Anglo-American oil agreement and the situation with which it deals. The booklet is an attempt to report and record the settled thinking of the petroleum industry on the subject.

"U. S. Foreign Oil Policy" is concerned with the wider context of foreign policy in which our foreign oil program will find its definition and its meaning. Basically, these two points of view are one—the welfare of the American petroleum industry and the American nation are alike at stake.

Trade Routes Shown

The New York Journal of Commerce, 63 Park Row, New York 15, has published a new postwar guide to "World Trade Routes" containing a complete survey of available vessels, number of monthly sailings and ports of call in each of the principal ship routes of the world. Copies may be had at 25 cents each from the New York Journal of Commerce.



Three Model ME-66 Murphy Diesel Engines, each rated at 150 HP continuous, 180 HP intermittent, at 1200 RPM, make a compact power plant of this portable drill rig.

THREE MURPHY DIESELS GIVE TEX HARVEY OIL COMPANY'S DRILL RIG 450 CONTINUOUS HP

TEAMED up to provide 450 continuous HP, 540 intermittent HP, these three Murphy Diesel engines are performing with dependability and economy on this portable drill rig for Tex Harvey Oil Company.

Year after year, Murphy Diesels continue to prove their outstanding value, as stationary and portable power plants, in oil field service, where rugged construction, compactness and relatively light weight, along with highest standards of reliability for heavy duty power are demanded.

Easy to start, economical to operate and maintain, Murphy Diesels are making good on the toughest of oil field jobs . . . living up to their reputation for more power, more profit. Write for bulletin.

MURPHY DIESEL CO.
5313 West Burnham Street
Milwaukee 14, Wisconsin
TULSA BRANCH:
416 South Detroit Avenue, Tulsa 3, Okla.

MEN IN THE INDUSTRY NEWS

Dr. Robert E. Wilson, chairman of the board and chief executive officer of the Standard Oil Company (Indiana), has been elected a member of the Board of Trustees of the University of Chicago.

Dr. R. E. Wilson

Associated with Standard of Indiana and affiliated companies since 1922, Dr. Wilson is known both as an executive and as an outstanding chemist. He has been granted over 90 patents and his scientific achievements won for him the Chemical Industry Medal in 1938 and the Perkin Medal, highest American honor in applied chemistry, in 1943. He served in the present war as chief petroleum consultant for the government and more recently has been chairman of the economics committee of the Petroleum Industry Council for War, and as director of the American Petroleum Institute.

Clyde Cantin has been made drilling superintendent for the Los Angeles basin district, for Shamrock Drilling Company, of Los Angeles. **Millard E. Rust** has been made drilling foreman and will be Cantin's assistant. **V. C. Rowell** has been made drilling superintendent in the Coalinga area. The company has moved two rigs into the Wilmington area and will drill for Union Pacific Railroad.

Joe Horneberger, Houston geologist, addressed the Houston Geological Society on "Stratigraphic Study of Portions of Jackson and Wharton Counties, Texas." **M. G. Cheney,** president of the American Association of Petroleum Geologists, discussed Association affairs.

David M. Grubbs, former district geologist for Shell Oil Company in Jackson, Mississippi, recently moved to Fort Worth, where he is associated with Danciger Oil and Refining Company as assistant chief geologist.

T. J. Conway, drilling contractor of Jackson, Mississippi, is drilling a wildcat test in Bolivar County, Mississippi, for **O. W. Killam,** independent operator of Laredo, Texas.

Lee Burress has been transferred from the production department in Illinois, to the scouting department in Shawnee, Oklahoma, by The Texas Company.

Edward F. Esteep, exploration draftsman for Shell Oil Company, has been transferred from the Centralia, Illinois, office to the Oklahoma City division office.

Dr. Maxwell Gensamer, a staff member at Carnegie Institute of Technology for 16 years, has become professor of metallurgy and head of mineral technology at Pennsylvania State College. Dr. Gensamer's professional association with Carnegie Tech began in 1929 when he was a graduate student and research assistant in the metals research laboratory. He began teaching metallurgy in 1935 and, since 1943, has held the rank of full professor.

Roscoe M. Simpson, geologist, has joined Helmerich & Payne, Inc., Cardinal Oil Company Division, with headquarters at San Angelo, Texas. He had been with the Permian Basin Sample Laboratory the past six months at Midland, and prior to that was with Cardinal Oil Company for 10 years.

Dana Hogan, president and manager of Hogan Petroleum Corporation, Los Angeles, spoke before the Los Angeles Basin API on "Functions of the Petroleum Industry War Council." Appearing on the same program was **Professor John Dodge,** head of the Petroleum Engineering Department of the University of Southern California, of Los Angeles. His subject was "Recent Oil Developments in Venezuela."

Captain J. J. Henderson, formerly employed by The Texas Pipe Line Company at Drumright, Oklahoma, and now flying with a tactical air command, has been awarded the Silver Star for gallantry in action and the Distinguished Flying Cross for completing numerous missions over enemy territory.

George P. Hardison, Oklahoma City district geologist for Shell Oil Company, has resigned to become associated with **Henry Schweer** as a consulting firm. Schweer was recently discharged from the armed forces.

Chester Naramore, executive secretary of the petroleum division of the American Institute of Mining and Metallurgical Engineers, has resigned, effective June 30. He plans to enter private business. He has headed the petroleum division since 1938.

Raymond F. Baker, chief geologist of The Texas Company, has been elected to the board of directors of the American Institute of Mining and Metallurgical Engineers, to fill the vacancy created by the recent resignation of Wallace E. Pratt who retired from active business.

H. L. Mott has recently joined the staff of the Midstates Oil Corporation in Oklahoma City, Oklahoma, and will cover the Ardmore, Oklahoma, district.

Lewis W. White has been named supervisor of the Independent Natural Gas Association's educational department with headquarters at Oklahoma City.

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TRADING POST SECTION
ON PAGE 87 OF THIS ISSUE

MEN IN THE INDUSTRY NEWS

J. L. Mullin has been promoted to vice president in charge of operations of the American Manganese Steel Division of the American Brake Shoe Company, with headquarters at Chicago Heights, Illinois.

J. L. Mullin

Associated with the manganese steel industry since 1914, when he joined the Edgar Allen Manganese Steel Company, forerunner of the present Brake Shoe Division, Mullin has advanced through the offices of local purchasing agent, foundry superintendent, works manager at the New Castle, Delaware, plant, and general superintendent of foundries.

Thomas J. Bannan, president of Western Gear Works of Seattle and Los Angeles and its associate, the Pacific Gear & Tool Works of San Francisco, was recently elected vice president of the American Gear Manufacturers' Association.

In addition to his 25 years of service with these two firms, Bannan is president of the Webster-Brinkley Company and the Hallidie Machine Company, both of Seattle, and is a member of the OPA advisory committee for the gear industry. He has been active in the affairs of the AGMA for many years and prior to his election was a member of the association's executive committee.

Louis C. Smith, president of the Harrisburg Gas Company, was elected president of the Pennsylvania Gas Association, succeeding **Charles K. Steinmetz,** Pennsylvania Power & Light Company, of Carlisle, Pennsylvania.

Smith joined the United Gas Improvement Company in 1908 in Philadelphia. He has been associated with the Omaha Gas Company, was president of the Fulton County Gas & Electric Company and vice president of New York Power & Light Corporation.

O. C. Guess, formerly with the Navarro Oil Company, is now field superintendent of production and drilling for Baldridge & King, producers and drilling contractors, McAllen, Texas.

F. A. Bush, chief geologist for Sinclair Prairie Oil Company, has been transferred from Tulsa to New York City, where he will continue as chief geologist and act as assistant to the president.

John H. Murrell of DeGolyer & McNaughton, consulting petroleum geologists and engineers of Dallas, spoke before the Tulsa Chapter of Nomads on "Oil Fields of the Middle East."

Frank King, North Texas scout for the Phillips Petroleum Company, was elected president of the North Texas Oil Scouts Association, which holds a weekly check-meet at Wichita Falls. **Charles D. George,** The Texas Company, and **Melvin Thrash,** Continental Oil Company, were chosen first and second vice presidents, respectively, while **Robert A. Shaw,** Sinclair Prairie Oil Company, was named secretary-treasurer.

H. Travis Brown, assistant division geologist at Oklahoma City for Cities Service Oil Company, has been transferred to the Bartlesville headquarters as division geologist in charge of development, and has been succeeded by **P. B. Nichols.**

Louis Campbell, manager of Magnolia Petroleum Company's Oklahoma land department will retire July 1, after 31 years service, and will be succeeded by **Cecil L. Lanier** who has been with the company 17 years. Campbell spent six years in Tulsa and since 1920 has headed the office at Oklahoma City.

H. O. Harder, division superintendent of Cities Service Oil Company, Oklahoma City, was guest speaker at the annual banquet of the Petroleum Engineers' Club, University of Oklahoma, at Norman, Oklahoma, June 5. He discussed the economy, technique and adaptability of cleaning out and reconditioning oil and gas wells by the new process of detonating glass marbles.

Dr. Robert A. Hardin, chairman of the engineering shops at the University of Oklahoma, addressed the Engineers Club of Tulsa, on plastics as related to the state, with emphasis on their fabrication from by-products and waste materials.

Walter B. Stone, petroleum engineer formerly employed by Gulf Oil Corporation in Houston and Fort Worth, and now serving with the Chinese Combat Command, U. S. Army, has been promoted to the rank of major.

James S. Gardner has been promoted to production superintendent for Kubat Drilling Company, Oklahoma City, Oklahoma. He is also acting as toolpusher on drilling jobs for the company. His headquarters have been moved to Pauls Valley, Oklahoma.

J. K. Wadley, Texarkana oil producer, and his wife contributed $25,000 for the Truett-Scarborough memorial building fund being raised by the Baptist Seminary at Fort Worth.

Bob Matthews Roberts, former Shell Oil Company scout at Lake Charles, Louisiana, and now with a tank destroyer unit in England, has been promoted from second lieutenant to first lieutenant.

Carl B. McLaughlin will head up the recently established engineering service division of Tube Turns, Louisville, Kentucky. He was formerly associated with the Pittsburgh, Pennsylvania, office.

C. B. McLaughlin

A native of Jacksonville, Illinois, McLaughlin was graduated from the University of Illinois in 1931 and was a metallurgist-engineer with United States Steel Corporation before joining Tube Turns in 1943.

John J. Heffernan has been appointed purchasing agent of Universal Atlas Cement Company and Atlas Lumnite Cement Company, United States Steel Corporation subsidiaries, with headquarters in New York City.

He succeeds **Richard B. Hynes,** who died March 21. Formerly secretary of Universal Atlas and of Atlas Lumnite, Heffernan has served for two years as assistant purchasing agent of both companies.

Carl L. Zak has been made assistant general manager of sales of Pittsburgh Steel Company, Pittsburgh. Since January, 1944, Zak has been manager of tubular sales, and previously was secretary of The Seamless Steel Tube Institute, Pittsburgh. Former connections include Youngstown Sheet & Tube Company, Youngstown, Ohio, and Globe Steel Tubes Company, Milwaukee, Wisconsin.

E. R. Smith has been made manager of oil country tubular sales of Pittsburgh Steel. He has been assistant manager of sales, oil country tubular goods for the past five years.

C. O. Long, service engineer, Oil Field Equipment Division of The Guiberson Corporation, Dallas, has been transferred from Lubbock to Odessa, Texas. He will be in charge of all service work in West Texas and New Mexico, with headquarters at 602 Perl Street, Odessa.

R. A. Feemster has been appointed sales manager of Kobe, Inc., for the Gulf Coast, East Texas, West Texas and North Texas, with headquarters in Dallas. Feemster joined Kobe as district representative in Oklahoma City in 1941 and was later appointed Mid-Continent Division sales manager, which position he held until his recent move.

R. A. Feemster

R. T. White has been appointed chief geologist of the California Division of Barnsdall Oil Company, with headquarters in the Petroleum Building, Los Angeles. He succeeds the late **E. W. Galliher.**

White became affiliated with Barnsdall Oil Company in December, 1937. In 1944 he was secretary-treasurer of the Pacific Section of the American Association of Petroleum Geologists, and is currently vice president of that organization.

Thomas J. Weaver of Grand Rapids, geologist and engineer with Michigan Consolidated Gas Company for nine years, has resigned to engage in independent gas development in Michigan. With **C. M. Ashby,** now living in Dallas, and formerly at Fruitport, Michigan, Weaver has organized the Ashby Oil and Gas Company.

R. W. Stewart has succeeded **Edward W. Reiser** as general manager, vice president and treasurer of the Bay Refining Company and the Bay Pipe Line Corporation, Bay City, Michigan. Reiser, who organized the companies with a number of independent producers in 1938, is retiring from the industry because of poor health.

J. W. Emison, vice president and treasurer of The Texas Pipe Line Company, Houston, has been elected to membership in the Controllers Institute of America.

A. A. Colbert has been promoted to head tool pusher for Creekmore Drilling Company, Tulsa.

Deaths

Dell J. Crosby of Houston, chief scout for the Humble Oil & Refining Company, died June 17. Crosby, 44, came to Houston 3½ years ago and was widely known in Texas oil circles. He was a past president of the National Oil Scouts and Landmen's Association.

Allan V. Ritchie, 59, superintendent of The Texas Company's Beacon (New York) research laboratory since it opened in 1931, died of a heart attack June 19, at the company's New York offices.

Robert W. St. Clair of Troup, Texas, machinist foreman with Sinclair Refining Company, pipe line department, died June 14. St. Clair, 48, joined the Prairie Pipe Line Company in 1919, and went with Sinclair in 1932.

C. Walter Spalding, manager of power transmission machinery for Link-Belt Company, died in Chicago May 25. His headquarters were at the company's Ewart plant, Indianapolis, Indiana, and he had been with Link-Belt since 1910.

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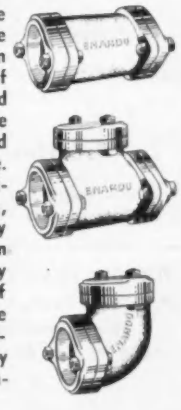

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NEW EQUIPMENT . . . LITERATURE

1—Safety Flashlight

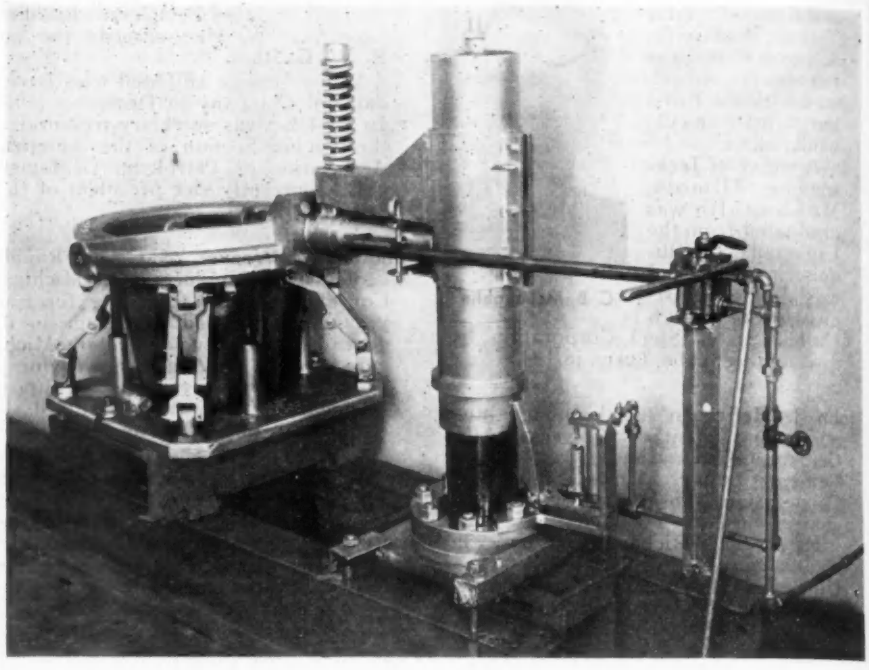
Justrite Manufacturing Company, Chicago, announces a new, handy safety flashlight.

Safety features include a "sealed-in" sturdy plastic case that fits the palm of the hand, that can be clipped to the belt, or that will stand alone on its own base. The light has a 1500-candle power beam from three standard dry cells to insure dependable service and is equipped with high efficiency standard .3 ampere bulbs that save battery drain.

The flashlight is recommended for use in hazardous locations in the petroleum industry. It is approved by the United States Coast Guard for use in pump rooms of tanker vessels, by the Underwriters' Laboratories, and by the United States Bureau of Mines for safe use around methane gas and air mixtures.

2—Rotary Pipe Slips

Ben F. Kelly Company, Tulsa, Oklahoma, announce important improvements in Kelco Safety Air-Operated Rotary Pipe Slips. These improvements include fewer moving parts, fully enclosed air cylinders, sturdier operating mechanism, wider application to all makes of rotary tables, more fool-proof, streamlined, and safer to operate. Safety latches that hold the slips in safety position until they are ready to set have also been included.



3—Variable Choke

Howard Smith Company, Houston, has developed the Three Bean Choke for oilfield use. It has a 5⅛-inch diameter open flow, and the choke size may vary from 1/16 to ½-inch in multiples of 1/64-inch. The first flow bean may be a blank to act as a wing valve and the others may be furnished each with two sizes of choke to suit a wide variety of conditions. This choke is tested to 6000 pounds.

4—Square Frame Welder

The Harnischfeger Corporation, Welding Division, Milwaukee, Wisconsin, has developed Model WA-300 square frame welder which provides a welding service range rating of from 60 to 375 amperes. This model retains the compact design which has found favor in smaller square frame types including two-part construction, single heat control, visual current calibration, and adaptability to parallel operation where higher amperage is desired.

Appearing for the first time are such new features as weather-proof construction, polarity reversing switch, and removable stator, plus overload protection both for contacts and for the new low-voltage magnetic starter.

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Check below the numbers identifying items on which you want additional information. Mail coupon to The Oil Weekly and your request will be forwarded to the manufacturer.

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In addition to information checked above, I would like more data on products or services advertised elsewhere in this issue by_____ Company

Name_____ Title_____

Company_____

Address or P. O. Box_____

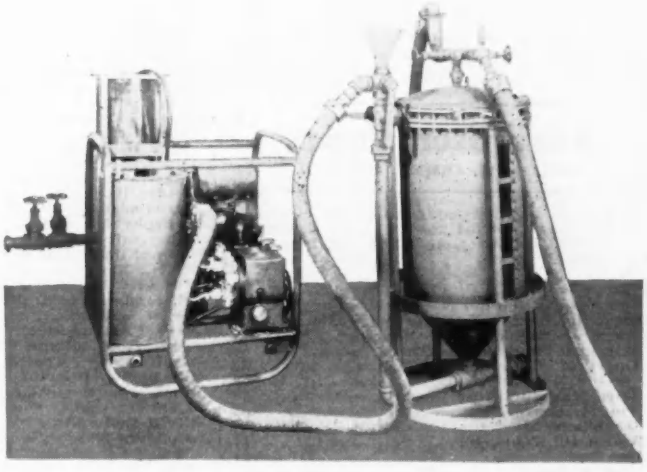
City_____ State_____

(To avoid delay print or type clearly name, company and mailing address)

5—Water Purifier

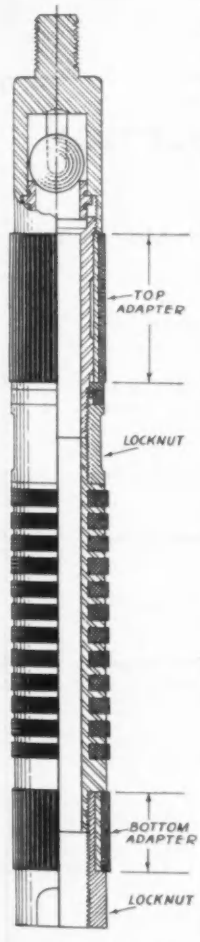
%Proportioneers, Inc.%, Providence, Rhode Island, have designed a portable water purification equipment known as %Proportioneers% Pur-O-Pumpers which are designed for field use and which can be carried to the job on a light truck.

River or pond water is pumped through the diatomaceous earth type filter for turbidity removal and is then sterilized with hypochlorite. Pure water is immediately available up to 16,000 gallons a day.



6—Extension Adapter

J. D. Cunningham of Houston, has perfected a multi-purpose extension adapter for oil well working barrel pump plungers. The adapter is of simple, novel design. An important feature involves use of a tough oil, acid and abrasive resistant plastic material applied and securely bonded to working surfaces that provides:



An added dura-seal bearing surface that serves to guide and align the plunger in the working barrel, thereby reducing side motion friction wear.

Sealing effect of the bearing serves as a shield that prevents sand and other gritty substances in fluids being pumped from entering and contacting the working surfaces of the plunger and working barrel, thereby minimizing the risk of excessive abrasion and wear on cups and working barrel walls.

The adapters act as a shock absorber for heavy dynamic impacts by taking and carrying the uid column load thereby lessening the load and excessive expansion on cups and ring.

The plunger attachments are adaptable for and can be easily and quickly installed and used on most types of ordinary plungers.

The device will be manufactured and marketed by Hahn & Clay.

7—Safety Seal Ring

J. G. Long, Houston, is offering the Double "O" safety seal ring to protect metal ring gaskets against corrosion and to act as an additional sealing agent. The ring is of synthetic rubber and is resistant to practically all acids and distillates, and withstands temperatures up

to 300° F. It is designed with a bead on both inside and outside circumferences. The bead abutting the metal ring is the larger of the two, and when the flanges are drawn tight, is compressed against the metal ring, sealing leaks that might exist due to distortion, denting, nicks, or other irregularities of the metal ring. In addition to compression by the flanges, pressure "flows" the bead against the metal gasket, further sealing against leaks and corrosion. The smaller bead prevents the ring from buckling while being placed in position and retards turbulence between the flanges.

The ring is made for use inside and outside the metal ring gasket. The prevention of corrosion and additional sealing afforded by the ring, makes it possible for metal ring gaskets to be used repeatedly. It compensates for leaks caused by loosened connections as a result of vibrations or elongation of the studs.

Use the Coupon

For free copies of Manufacturers' Literature or more information on products described on these pages, use the convenient mailing coupon on page 94.

8—Tape

Irvington Varnish and Insulator Company, 6 Argyle Terrace, Irvington, New Jersey, has introduced a transparent, flexible, thermo-plastic tape which is said to greatly facilitate inspection and servicing of equipment.

Useful not only as electrical insulation, Fibron Tape 3 also protects wiring, cables, and equipment against abrasion. The tape is heat sealing, flame resistant, flexible at low temperatures, and resists attack by acids, alkalis, moisture, oil, grease and corrosive fumes. With proper adhesives, it may be bonded to fabrics, metal, ceramics, wood, and other materials.

Fibron Tapes have been applied successfully as gasketing material; and in the splicing of plastic insulated wire and cable.

Literature

9—Arc Welding

General Electric Company, Schenectady, New York, has published a bulletin on "How to Repair Tractor Parts by Arc Welding." The bulletin is listed as GEA-3329 and it discusses in detail arc-welding procedures which have proved highly successful in resurfacing worn parts of a large crawler-type Diesel tractor.

10—Supercharging

B-W Superchargers, Inc., Milwaukee, Wisconsin, has published a bulletin titled "Supercharging for Greater Power and Improved Performance." The publication is an illustrated and instructional booklet giving something of the history of supercharging, the mechanical principles of the Roots type, positive displacement supercharger, methods of manufacture and application. Advantages of positive displacement superchargers with a wide range of applications are shown.

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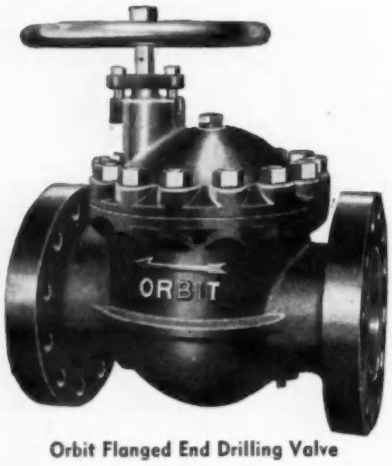

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Oklahoma Store Opened

Jones & Laughlin Supply Company has opened a store in Crescent, Oklahoma. Fred Bozeman, formerly at Russell, Kansas, has been transferred to Crescent and made store manager. H. D. Witt, formerly at Perry, Oklahoma, will be connected with the new store.

HOMCO Honored

The Houston Oil Field Material Company, Inc., Houston, has received the second star in its E Flag for the production of Army materiel.

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